This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

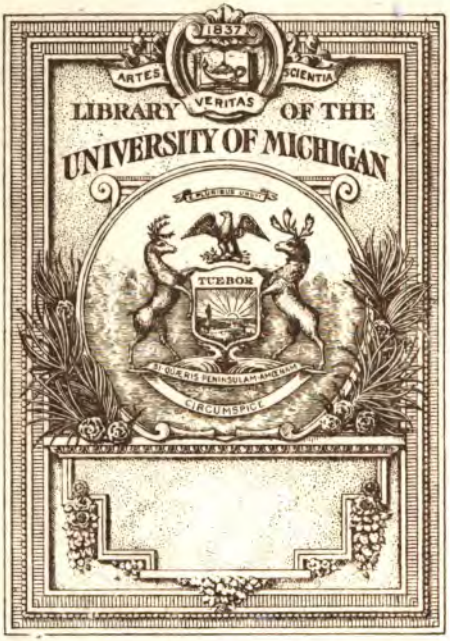
+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

PRINCETON UNIVERSITY CATALOGUE 1917-1918

A 585525



THE GIFT OF
Princeton University

LD
4587

STREET
STREET
STREET
STREET
STREET
86

CATALOGUE

OF

PRINCETON UNIVERSITY

ONE HUNDRED AND SEVENTY-FIRST YEAR

1917-1918

PUBLISHED BY THE UNIVERSITY
PRINCETON, NEW JERSEY
1917

GENERAL STATEMENT

Princeton University offers: (1) *Undergraduate* courses in arts and sciences; (2) *Graduate* courses in arts and sciences; and (3) *Technical* courses.

(1) The plan of undergraduate liberal studies provides three distinct courses:

First, the historic Bachelor of Arts course, in which Greek is required for entrance and forms a part of the curriculum of the first two years;

Second, the Bachelor of Letters course, a modern variant of the Bachelor of Arts course, in which Greek is replaced by additional required work in modern languages or science, and which is mainly humanistic;

Third, the Bachelor of Science course, which is identical with the Bachelor of Letters course in entrance requirements and prescribed studies, but which, in the more advanced years, is mainly scientific in its trend.

(2) The Graduate School offers advanced and research work in arts and sciences, leading to the degrees of Master of Arts and Doctor of Philosophy.

(3) The technical courses offered are: a four year undergraduate course in Civil Engineering (in some cases reduced to three); and a two year course in Electrical Engineering.

CONTENTS

OFFICE HOURS 8

CALENDAR 10

STATED MEETINGS 13

PART I. OFFICERS OF THE UNIVERSITY

Trustees of the University 17
Alumni Trustees 18
Standing Committees of the Trustees 19
Faculty and Instructors 20
Officers of Administration 38
Standing Committees of the Faculty 40
Graduate Council Departmental Conference Committees 41

PART II. HISTORY AND GOVERNMENT OF THE UNIVERSITY

Founding of the Log College 45
Forces of the Log College unite with the first Trustees in founding the College of New Jersey . . 45
The Charters of 1746 and 1748 46
Founding of the John C. Green School of Science 55
Title of Princeton University assumed 56
Alumni Representation adopted 56
University Seal 57
Form of Bequest 58

PART III. TERMS OF ADMISSION

Entrance Examinations 61
College Entrance Board Examinations 61
Schedule of June Examinations 63

Princeton University (2-14-1 Dg

321681

List of Examination Centres 67
September Examinations 68
Old Plan of Admission 72
New Plan of Admission 73
Freshman Entrance Requirements 79
Table of Values in Units 83
Freshman Entrance Subjects 82
Asiatic Students 108
Admission to Special Courses 109
Students Pursuing Partial Courses 109
Admission from Other Colleges 110
Regulation Concerning Secret Societies 110

PART IV. PLAN AND METHOD OF UNDERGRADUATE STUDY

PLAN OF UNDERGRADUATE STUDY
The Freshman Year 116
The Sophomore Year 116
The Junior and Senior Years 118
METHOD OF UNDERGRADUATE INSTRUCTION 124
HONORS 126
FINAL SPECIAL HONORS 127
DEPARTMENT OF CIVIL ENGINEERING 130

PART V. DEPARTMENTS OF THE UNIVERSITY

THE UNDERGRADUATE DEPARTMENTS
Academic Courses of Instruction 139
Scientific Courses of Instruction 182
Department of Civil Engineering 213
THE SCHOOL OF ELECTRICAL ENGINEERING 222
THE GRADUATE SCHOOL 227
Fees 228

Degrees 229
The Graduate College 233
Fellowships 236
Courses of Instruction 247
Directors of the Seminaries 313
DEPARTMENT OF MUSIC 314
THE UNIVERSITY LIBRARY 316

PART VI. UNITED STATES SCHOOL OF MILITARY AERONAUTICS

PART VII. GENERAL REGULATIONS, RELIGIOUS WORSHIP AND ACTIVITIES, AND PUBLIC LECTURES

GENERAL REGULATIONS
Terms and Vacations 335
Regulations Concerning Registration 335
Regulations Concerning Attendance 337
Mode of Conducting Examinations 338
Regulations Concerning Conditions 339
Freshman Tests 346
Standing 346
Infirmary Regulations 348
RELIGIOUS WORSHIP AND ACTIVITIES 350
PUBLIC LECTURES 355

PART VIII. GROUNDS AND BUILDINGS, AND INSTITUTIONS CONNECTED WITH THE UNIVERSITY

The Campus 359
Nassau Hall 360
Dean's House 361

Stanhope Hall 361
Prospect 362
Dickinson Hall 362
School of Science Building 362
Marquand Chapel 363
Alexander Hall 364
Isabella McCosh Infirmary 365
Fitz Randolph Gateway 366
McCosh Hall 367
Sun Dial 367
Dormitories 367
Dining Halls 371
Graduate College 373
Laboratories and Museums 375
Literary Societies 391
Athletic Grounds and Buildings 392
Princeton University Press 397
Princeton University Store 397

PART IX. EXPENSES, ALLOTMENT OF ROOMS, UNIVERSITY DINING HALLS, UNIVERSITY BILLS, PRIZES, REMISSION OF TUITION, SCHOLARSHIPS, AND CHARITABLE FUNDS

Expenses 401
Rules Governing the Allotment and Rental of Rooms 403
List of Dormitory Rooms 409
University Dining Halls 414
University Bills 415
Prizes 417
Remission of Tuition 429
Scholarships 432
Endowment and Administration of Scholarships . 443

Funds for Candidates for the Ministry 445
Charitable Funds 445
Bureau of Student Self-Help 446

PART X. DEGREES AND HONORS, 1916-1917

Degrees Conferred 449
Honors and Prizes 457

PART XI. ALUMNI REPRESENTATION, GRADUATE COUNCIL, CONFERENCE COMMITTEES, AND ALUMNI ASSOCIATIONS

PLAN OF ALUMNI REPRESENTATION 465
GRADUATE COUNCIL 467
Departmental Conference Committees 469
ALUMNI ASSOCIATIONS 470

PART XII. STUDENTS, DIRECTORY AND INDEX

STUDENTS OF THE UNIVERSITY
The Graduate School 477
Undergraduates
The Senior Class 485
The Junior Class 487
The Sophomore Class 492
The Freshman Class 498
Students Qualifying for Regular Standing . . . 507
Special Students 508
Students Pursuing Partial Courses 508
GENERAL SUMMARY 509
SUMMARY OF STUDENTS BY STATES 510
ABBREVIATIONS 512
DIRECTORY OF OFFICERS AND STUDENTS 513
INDEX 529

OFFICE HOURS

THE PRESIDENT OF THE UNIVERSITY: Nassau Hall, 11 A. M. to 1 P. M. daily.

THE TREASURER OF THE UNIVERSITY: Stanhope Hall, 9 A. M. to 4.30 P. M.; Saturdays, 9 A. M. to 12.30 P. M.

THE SECRETARY OF THE UNIVERSITY: Nassau Hall, 9 A. M. to 4.30 P. M.; Saturdays, 9 A. M. to 12.30 P. M.

THE REGISTRAR OF THE UNIVERSITY: Nassau Hall, 8.30 A. M. to 4.30 P. M.; Saturdays, 8.30 A. M. to 12.30 P. M.

THE SECRETARY OF BUSINESS ADMINISTRATION, THE SUPERINTENDENT OF GROUNDS AND BUILDINGS, THE UNIVERSITY POWER COMPANY, AND THE PURCHASING DEPARTMENT: Stanhope Hall, 9 A. M. to 4.30 P. M.; Saturdays, 9 A. M. to 12.30 P. M.

THE DEAN OF THE GRADUATE SCHOOL: Nassau Hall. Office open from 9 A. M. to 5 P. M.; Saturdays, 9 A. M. to 12 M.; July 1 to September 1, 9 A. M. to 12 M. Office hours of the Dean, 12 M. to 1 P. M. daily, except Saturday.

THE DEAN OF THE FACULTY: Dean's House, 1.30 to 2.30 P. M. daily, except Saturday.

THE DEAN OF THE COLLEGE: Nassau Hall, 2 to 3 P. M. daily, except Saturday.

THE CLERK OF THE FACULTY AND THE EDITOR OF THE GENERAL BIOGRAPHICAL CATALOGUE: Nassau Hall, 9 A. M. to 4.30 P. M.; Saturdays, 9 A. M. to 12.30 P. M.

THE COMMITTEE ON ENTRANCE, Professor Buffum, Secretary: 60 Hodge Road, 1.00 P. M. daily.

THE COMMITTEE ON EXAMINATIONS AND STANDING, DEAN W. F. Magie, Chairman: Dean's House, 1.30 to 2.30 P. M.. daily, except Saturday. C. H. Jones, Recording Secretary, Registrar's Office.

THE COMMITTEE ON OUT-DOOR SPORTS, Professor McClenahan, Chairman: The Palmer Physical Laboratory, Room 207, 12.30 to 1 P. M. Mondays and Tuesdays; 12 M. to 1 P. M. Wednesdays, Thursdays and Fridays; or at the office of the Dean of the College, 2 to 3 P. M. daily, except Saturday.

THE COMMITTEE ON NON-ATHLETIC ORGANIZATIONS, Professor D. C. Stuart, Secretary: Room 208, Nassau Hall, 4 to 5 P. M. Mondays.

For catalogues and other numbers of the OFFICIAL REGISTER of Princeton University apply to the Secretary of the University, Princeton, New Jersey.

For information concerning entrance and courses of instruction apply to the Registrar of the University, Princeton, New Jersey.

For information concerning the Graduate School apply to the Dean of the Graduate School, Princeton, New Jersey.

CALENDAR

1917

Sept. 10-22. Examinations for removal of first and second term Class F conditions.

Sept. 17-20. Examinations for admission, held in Princeton only.

Sept. 25, 3 P. M. Formal opening exercises.

Sept. 30. Last day for enrollment of Graduate Students at the office of the Dean of the Graduate School.

Oct. 11-13. First part of examination for the degree of Doctor of Philosophy.

Oct. 22. Commemoration Day.

Oct. 25. Meeting of the Board of Trustees.

Nov. 29-Dec. 3, 10.30 A. M. Thanksgiving Recess.

Dec. 20, 1.30 P. M. Christmas vacation begins.

1918

Jan. 4, 10.30 A. M. Christmas vacation ends.

Jan. 10. Meeting of the Board of Trustees.

Jan. 21. Last day for reporting second term electives.

Jan. 30-Feb. 12. First term examinations.

Feb. 13. Second term begins.

Feb. 22. Washington's Birthday. Class of 1876 Prize Debate.

March 1. Last day for receiving applications for Fellowships and Graduate Scholarships.

March 6, 12 M. Stated Meeting of the Faculty Committee on the Course of Study.

March 27, 1.30 P. M.-April 2, 10.30 A. M. Easter recess.

April 11. Meeting of the Board of Trustees.

May 9-11. First part of examination for the degree of Doctor of Philosophy.

May 23-June 5. Senior final examinations.

June 1-14. Examinations of the three lower classes.

June 6. Last day for receiving applications for the Master's degree.

June 6-14. Examinations for the removal of Class F conditions in first and second term senior subjects.

June 15. Junior Orator and Maclean Prize contests.

June 16. Baccalaureate Sunday.

June 17. Commencement meeting of the Board of Trustees. Annual meetings of the Literary Societies. Class Day.

June 18. 171st Annual Commencement. Alumni Trustee election. Alumni Luncheon.

June 17-22. College Entrance Board examinations for admission, held simultaneously in Princeton and elsewhere.

Sept. 10-24. Examinations for removal of first and second term, Class F conditions.

Sept. 16-19. Examinations for admission, held in Princeton only.

Sept. 24. Formal opening exercises. Marquand Chapel, 3 p. m.

Sept. 30. Last day for registration of Graduate Students. Office of the Dean of the Graduate School, Nassau Hall.

Oct. 10-12. First part of examination for the degree of Doctor of Philosophy.

Oct. 22. Commemoration Day.
Oct. 24. Fall meeting of the Board of Trustees.
Nov. 28. Thanksgiving Day.
Dec. 19, 1.30 P. M. Christmas vacation begins.

1919

Jan. 6, 10.30 A. M. Christmas vacation ends.
Jan. 9. Meeting of the Board of Trustees.
Jan. 22. Last day for reporting second term electives.
Jan. 28-Feb. 10. First term examinations.
Feb. 13, 8 A. M. Second term begins.
Feb. 22. Washington's Birthday. Class of 1876 Prize Debate.
Mar. 1. Last day for receiving applications for Fellowships and Graduate Scholarships.
Mar. 5. Stated meeting of the Faculty Committee on the Course of Study.
April 10. Meeting of the Board of Trustees.
April 17, 1.30 P. M.-April 22, 10.30 A. M. Easter Recess.
May 8-10 First part of examination for degree of Doctor of Philosophy.
May 24-June 6 Senior final examinations.
May 31-June 13 Examinations of the three lower classes.
June 12. Last day for receiving applications for the Master's degree.
June 9-14 Examinations for removal of Class F conditions in first and second term senior subjects.
June 14. Junior Orator and Maclean Prize contests.
June 15. Baccalaureate Sunday.

June 16. Commencement meeting of the Board of Trustees. Annual meetings of the Literary Societies. Class Day.

June 17. 172d Annual Commencement. Alumni Trustee election.

Stated Meetings

The stated meetings of the Board of Trustees are held on the fourth Thursday in October, on the second Thursdays of January and April, and on the Monday before Commencement.

Meetings of the Board, 1917-18: October 25, January 10, April 11, June 17.

The University Faculty meets at 5 P. M. on the first and third Mondays of each month during the academic year except when the University is not in session. It also meets immediately after the formal exercises on the opening day in September.

Faculty Meetings, 1917-18: September 25, October 1, 15, November 5, 19, December 3, 17, January 7, 21, February 4, 18, March 4, 18, April 15, May 6, 20, June 3.

JULY, 1917

Su	M	Tu	W	Th	F	S
1	*2*	*3*	*4*	*5*	*6*	7
8	*9*	*10*	*11*	*12*	*13*	14
15	*16*	*17*	*18*	*19*	*20*	21
22	*23*	*24*	*25*	*26*	*27*	28
29	*30*	*31*	..	..	..	..
..	..	..	..	..	..	..

AUGUST, 1917

Su	M	Tu	W	Th	F	S
..	..	..	*1*	*2*	*3*	*4*
5	*6*	*7*	*8*	*9*	*10*	*11*
12	*13*	*14*	*15*	*16*	*17*	*18*
19	*20*	*21*	*22*	*23*	*24*	*25*
26	*27*	*28*	*29*	*30*	*31*	..
..	..	..	..	..	..	..

SEPTEMBER, 1917

Su	M	Tu	W	Th	F	S
..	..	..	..	..	..	*1*
2	*3*	*4*	*5*	*6*	*7*	*8*
9	*10*	*11*	*12*	*13*	*14*	*15*
16	*17*	*18*	*19*	*20*	*21*	*22*
23	*24*	25	26	27	28	29
30	..	..	..	..	..	..

OCTOBER, 1917

..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	.	..	..
..	..	..	..	..	..	..

NOVEMBER, 1917

..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	*29*	*30*	..
..	..	..	..	..	..	..

DECEMBER, 1917

..	..	..	..	..	..	*1*
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	*19*	*20*	*21*	*22*
23	*24*	*25*	*26*	*27*	*28*	*29*
30	*31*	..	..	..	..	..

JANUARY, 1918

..	..	*1*	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	..	..
..	..	..	..	..	..	..

FEBRUARY, 1918

..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	*22*	23
24	25	26	27	28	.	..
..	..	..	..	..	..	..

MARCH, 1918

..	..	..	..	.	1	2
3	4	5	6	*7*	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	*28*	*29*	*30*
31	..	..	..	..	..	..

APRIL, 1918

..	*1*	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	..	..	..	..
..	..	..	..	..	..	..

MAY, 1918

..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	..
..	..	..	..	..	..	..

JUNE, 1918

..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	*19*	*20*	*21*	*22*
23	*24*	*25*	*26*	*27*	*28*	*29*
30	..	..	..	..	..	..

JULY, 1918

..	*1*	*2*	*3*	*4*	*5*	*6*
7	*8*	*9*	*10*	*11*	*12*	*13*
14	*15*	*16*	*17*	*18*	*19*	*20*
21	*22*	*23*	*24*	*25*	*26*	*27*
28	*29*	*30*	*31*	..	..	..

AUGUST, 1918

..	..	..	..	*1*	*2*	*3*
4	*5*	*6*	*7*	*8*	*9*	*10*
11	*12*	*13*	*14*	*15*	*16*	*17*
18	*19*	*20*	*21*	*22*	*23*	*24*
25	*26*	*27*	*28*	*29*	*30*	*31*

SEPTEMBER, 1918

1	*2*	*3*	*4*	*5*	*6*	7
8	*9*	*10*	*11*	*12*	*13*	14
15	*16*	*17*	*18*	*19*	*20*	*21*
22	*23*	24	25	26	27	28
29	30	..	..	..	..	..

OCTOBER, 1918

..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	..	..

NOVEMBER, 1918

..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	*28*	29	30

DECEMBER, 1918

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	*19*	*20*	*21*
22	*23*	*24*	*25*	*26*	*27*	*28*
29	*30*	*31*	..	..	..	..

JANUARY, 1919

..	..	..	*1*	*2*	*3*	*4*
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	..
..	..	..	..	..	..	..

FEBRUARY, 1919

..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	*22*
23	24	25	26	27	28	..
..	..	..	..	..	..	..

MARCH, 1919

..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	..	..	..	..	..

APRIL, 1919

..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	*17*	*18*	*19*
20	*21*	*22*	23	24	25	26
27	28	29	30	..	..	..

MAY, 1919

..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

JUNE, 1919

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	*18*	*19*	*20*	*21*
22	*23*	*24*	*25*	*26*	*27*	*28*
29	*30*	..	..	..	..	..

Days upon which the University is not in session are *italicized.*

PART I

OFFICERS OF THE UNIVERSITY

TRUSTEES OF THE UNIVERSITY

THE GOVERNOR OF THE STATE OF NEW JERSEY, *ex-officio*, PRESIDENT OF THE BOARD OF TRUSTEES.

JOHN GRIER HIBBEN, PH.D., LL.D., LITT.D., PRESIDENT OF THE UNIVERSITY and, in the absence of the Governor, President of the Board.

LIFE TRUSTEES

HON. JOHN AIKMAN STEWART, LL.D. SENIOR TRUSTEE	New York, N. Y.
M. TAYLOR PYNE, L.H.D.	Princeton, N. J.
GEORGE B. STEWART, D.D., LL.D	Auburn, N. Y.
CYRUS H. McCORMICK, A.M.	Chicago, Ill.
JOHN DIXON, D.D.	Trenton, N. J.
MELANCHTON W. JACOBUS, D.D.	Hartford, Conn.
HON. BAYARD HENRY, A.M.	Philadelphia, Pa.
SIMON J. McPHERSON, D.D.	Lawrenceville, N. J.
HENRY W. GREEN, A.M., LL.B.	Trenton, N. J.
ALEXANDER VAN RENSSELAER, A.M.	Philadelphia, Pa.
ARCHIBALD D. RUSSELL, A.M.	Princeton, N. J.
JOHN DEWITT, D.D., LL.D.	Princeton, N. J.
ROBERT GARRETT, B.S.	Baltimore Co., Md.
HENRY B. THOMPSON, B.S.	Greenville, Del.
JOSEPH B. SHEA, A.B.	Pittsburgh, Pa.
EDWARD W. SHELDON, A.M.	New York, N. Y.
PARKER D. HANDY, A.B.	New York, N. Y.
*JOHN M. T. FINNEY, M.D.	Baltimore, Md.
WILLIAM COOPER PROCTER, B.S.	Cincinnati, Ohio
CHARLES SCRIBNER, A.B.	Morristown, N J.
JOHN O. H. PITNEY, A.M.	Morristown, N J.
WILLIAM C. OSBORN, LL.D.	New York, N. Y.
HENRY C. FRICK	Pittsburgh, Pa.
LOUIS D. RICKETTS, D.Sc.	Warren, Ariz.

*Absent in war service.

ALUMNI TRUSTEES

HOWARD C. PHILLIPS, C.E. ..... Philadelphia, Pa.
(Term expires June, 1918)

WILSON FARRAND, A.M. ..... South Orange, N. J.
(Term expires June, 1919)

HENRY S. JOHNSON, A.B. ..... Cleveland, O.
(Term expires June, 1920)

T. WILLIAMS ROBERTS, B.S. ..... Philadelphia, Pa.
(Term expires June, 1921)

MATTHEW C. FLEMING, A.M., LL.B. .... New York, N. Y.
(Term expires June, 1922)

Treasurer
HENRY G. DUFFIELD, A.B.

Acting Secretary
VARNUM LANSING COLLINS, A.M.

Secretary of Business Administration
GEORGE CLARENCE WINTRINGER, E.E.

Supervising Architect
RALPH ADAMS CRAM, LITT.D.

Counsel
FRANCIS SPEIR, A.M., LL.B.

Consulting Landscape Gardener
BEATRIX FARRAND

STANDING COMMITTEES OF THE BOARD OF TRUSTEES

Committee on Finance: MR. HANDY, Chairman; PRESIDENT HIBBEN, MR. STEWART, MR. PYNE, MR. GREEN, MR. SHELDON, MR. PROCTER, MR. SCRIBNER, MR. PITNEY, MR. OSBORN, (MR. DUFFIELD, Secretary).

Committee on Grounds and Buildings: MR. THOMPSON, Chairman; PRESIDENT HIBBEN, MR. PYNE, MR. HENRY, MR. GREEN, MR. RUSSELL, MR. GARRETT, MR. HANDY, MR. ROBERTS, MR. RICKETTS, (MR. WINTRINGER, Secretary).

Committee on the Curriculum: REV. DR. JACOBUS, Chairman; PRESIDENT HIBBEN, DEAN MAGIE, DEAN WEST, DEAN FINE, REV. DR. MCPHERSON, REV. DR. DEWITT, MR. THOMPSON, MR. FARRAND, (Secretary), DR. FINNEY, MR. FLEMING, MR. PHILLIPS.

Committee on the Library: MR. SCRIBNER, Chairman; PRESIDENT HIBBEN, DR. RICHARDSON, (Secretary), MR. GREEN, MR. VAN RENSSELAER, MR. RUSSELL, MR. PITNEY, MR. JOHNSON.

Committee on Honorary Degrees: PRESIDENT HIBBEN, Chairman; REV. DR. JACOBUS, MR. SHELDON, MR. FARRAND, (Secretary), MR. SCRIBNER, PROFESSOR SCOTT, PROFESSOR CAPPS, PROFESSOR MUNRO.

Committee on the Graduate School: MR. PYNE, Chairman; PRESIDENT HIBBEN, DEAN WEST, (Secretary), MR. MCCORMICK, REV. DR. JACOBUS, MR. SHEA, MR. FARRAND, MR. PROCTER, MR. FLEMING.

Committee on Morals and Physical Education: MR. GARRETT, Chairman; PRESIDENT HIBBEN, DEAN MCCLENAHAN, (Secretary), REV. DR. STEWART, REV. DR. DIXON, REV. DR. MCPHERSON, DR. FINNEY, MR. JOHNSON.

Committee on Sanitation (advisory to Committee on Grounds and Buildings): PROFESSOR RAYCROFT, Chairman; DR. FINNEY, PROFESSOR CONKLIN, PROFESSOR LOOMIS, DR. PATON, MR. WINTRINGER, (Secretary).

Committee on Conference (with Committee on the Curriculum): PROFESSOR ABBOTT, Chairman; PROFESSOR CONKLIN, PROFESSOR FITE, PROFESSOR KEMMERER, PROFESSOR OSGOOD, PROFESSOR TROWBRIDGE, PROFESSOR WESTCOTT.

*FACULTY AND INSTRUCTORS

JOHN GRIER HIBBEN, PH.D., LL.D., LITT.D.
PRESIDENT
Stuart Professor of Philosophy
Prospect

FRANCIS LANDEY PATTON, D.D., LL.D.
EX-PRESIDENT
Stuart Professor of Ethics and the Philosophy of Religion, Emeritus
Hamilton, Bermuda

GEORGE MACLOSKIE, D.Sc., LL.D.
Professor of Biology, Emeritus
239 Nassau St.

CHARLES McMILLAN, A.M., C.E.
Professor of Civil Engineering, Emeritus
40 Bayard Lane

THEODORE WHITEFIELD HUNT, PH.D., L.H.D.
Professor of English
72 Library Place

WILLIAM LIBBEY, D.Sc., Princeton
Professor of Physical Geography and Director of the E. M. Museum of Geology and Archaeology
Thanet Lodge

WILLIAM BERRYMAN SCOTT, PH.D., LL.D.
Sc.D. (Harv. et Oxon.)
Blair Professor of Geology
30 Bank Street

FREDERICK NEWTON WILLSON, A.M., C.E.
Professor of Graphics
P. O. Box 63, Princeton, N. J.

ALLAN MARQUAND, PH.D., L.H.D.
Professor of Art and Archaeology and Director of the Museum of Historic Art
Guernsey Hall

*The Faculty list is arranged in four groups; professors, assistant professors, lecturers, and instructors. To this list is added the assistants in instruction. In each group the names occur in the order of academic seniority.

ANDREW FLEMING WEST, PH.D., LL.D.
HON. D.LITT., (OXON.)
DEAN OF THE GRADUATE SCHOOL
Giger Professor of Latin
Wyman House, Graduate College

HERMANN CARL OTTO HUSS, PH.D., Jena
Professor of Modern Languages and Literature, Emeritus
6 Mercer St.

HENRY BURCHARD FINE, PH.D., LL.D.
DEAN OF THE DEPARTMENTS OF SCIENCE
Dod Professor of Mathematics
73 Library Place

JOHN HOWELL WESTCOTT, PH.D., Princeton
Musgrave Professor of Latin and Tutor in Roman Law
200 Mercer St.

WILLIAM FRANCIS MAGIE, PH.D., LL.D.
DEAN OF THE FACULTY
Henry Professor of Physics
The Dean's House

ERNEST CUSHING RICHARDSON, PH.D.,
Librarian
220 Mercer St.

LEROY WILEY McCAY, D.Sc., Princeton
Professor of Chemistry
2 Morven St.

HENRY DALLAS THOMPSON, D.Sc., PH.D.
Professor of Mathematics
11 Morven St.

GEORGE McLEAN HARPER, PH.D., Princeton
Holmes Professor of Belles Lettres and English Language and Literature
36 Mercer St.

*PAUL VAN DYKE, D.D.
Pyne Professor of History
Pyne Tower, Graduate College

HERBERT STEARNS SQUIER SMITH, C.E.
Professor of Civil Engineering
94 Bayard Lane

WALTER BUTLER HARRIS, C.E.
Professor of Geodesy
Greenholm

†HENRY VAN DYKE, D.D., LL.D., D.C.L. (OXON.)
Professor of English Literature
Avalon

ELMER HOWARD LOOMIS, PH.D., D.SC.
Professor of Physics
302 Nassau St.

WALTER MEAD RANKIN, PH.D., Munich
Professor of Biology
Curator of Herbarium
5 Evelyn Place

CHARLES FREEMAN WILLIAMS McCLURE, D.Sc.
Class of 1877 Professor of Zoölogy
2 Morven St.

‡HOWARD CROSBY WARREN, PH.D., Johns Hopkins
Stuart Professor of Psychology
Director of the Psychological Laboratory

THOMAS MARC PARROTT, PH.D., Leipsic
Professor of English
104 Mercer St.

EDMUND YARD ROBBINS, A.M.
Ewing Professor of Greek Language and Literature
144 Library Place

*Absent in war service.
† Absent on leave, without salary.
‡ Absent on leave.

ALEXANDER HAMILTON PHILLIPS, D.Sc., Princeton
Professor of Mineralogy
54 Hodge Road

FRED NEHER, A.M.
Professor of Organic Chemistry
148 Library Place

WILLIAMSON UPDIKE VREELAND, D. ès L., Geneva
Woodhull Professor of Romance Languages
180 Mercer St.

†WILLIAM KELLY PRENTICE, PH.D., Halle
Professor of Greek
Princeton Bank Building

CHARLES HENRY SMYTH, JR., PH.D.
Professor of Geology
22 Morven St.

HOWARD CROSBY BUTLER, A.M.
Professor of Art and Archaeology
Pyne Tower, Graduate College

*NORMAN KEMP SMITH, D.PHIL., St. Andrews
McCosh Professor of Philosophy

HOWARD McCLENAHAN, E.E., M.S., LL.D.
DEAN OF THE COLLEGE
Professor of Physics
Joseph Henry House, College Place

*AUGUSTUS TROWBRIDGE, PH.D., Berlin
Professor of Physics
146 Hodge Road

DUANE REED STUART, PH.D., Michigan
Professor of Classics
101 Broadmead

† Absent on leave, second term.
*Absent in war service.

CHRISTIAN GAUSS, A.M., LITT.D.
Professor of Modern Languages
106 Fitz Randolph Road

EDWARD CAPPS, PH.D., LL.D.
Professor of Classics
150 Fitz Randolph Road

EDWIN GRANT CONKLIN, PH.D., D.Sc.
Professor of Biology
139 Broadmead

FRANK FROST ABBOTT, PH.D., Yale
Kennedy Professor of Latin Language and Literature
62 Battle Road

HENRY JONES FORD
Professor of Politics
42 Cleveland Lane

MALCOLM MACLAREN, E.E., A.M.
Professor of Electrical Engineering
16 Prospect Ave.

*EDWIN PLIMPTON ADAMS, PH.D., Harvard
Professor of Physics
12 Nassau St.

LUTHER PFAHLER EISENHART, PH.D., Johns Hopkins
Professor of Mathematics
22 Alexander St.

GEORGE AUGUSTUS HULETT, PH.D., Leipsic
Professor of Physical Chemistry
44 Washington Road

WILLIAM FOSTER, PH.D., Princeton
Professor of Chemistry
41 Battle Road

*Absent in war service.

ROGER BRUCE CASH JOHNSON, PH.D., Princeton
Professor of Philosophy
129 Broadmead

*ROBERT McNUTT McELROY, PH.D., Princeton
Edwards Professor of American History

*FRANK JEWETT MATHER, JR., PH.D., L.H.D.
Marquand Professor of Art and Archaeology
3 Evelyn Place

*OSWALD VEBLEN, PH.D., Chicago
Professor of Mathematics
58 Battle Road

EDWARD SAMUEL CORWIN, PH.D., Pennsylvania
Professor of Politics
115 Prospect Ave.

HARRY FRANKLIN COVINGTON, A.M.
Professor of Public Speaking and Debate
34 Edgehill St.

ULRIC DAHLGREN, M.S.
Professor of Biology
7 Evelyn Place

FRANK ALBERT FETTER, PH.D., LL.D.
Professor of Political Economy
121 Broadmead

*WILLIAM GILLESPIE, PH.D., Chicago
Professor of Mathematics
12 Bank St.

DAVID MAGIE, PH.D., Halle
Professor of Classics
101 Library Place

*Absent in war service.

JOSEPH EDWARD RAYCROFT, A.B., M.D.
Professor of Hygiene and Physical Education
Director of the Department of Physical Education
120 Broadmead

HENRY NORRIS RUSSELL, PH.D., Princeton
Professor of Astronomy
Director of the Observatory
79 Alexander St.

JOHN DUNCAN SPAETH, PH.D., Leipsic
Professor of English
32 Edgehill St.

DOUGLAS LABAREE BUFFUM, PH.D., Johns Hopkins
Professor of Romanic Languages and Literature
60 Hodge Road

VARNUM LANSING COLLINS, A.M.
CLERK OF THE FACULTY
ACTING SECRETARY OF THE UNIVERSITY
Professor of the French Language and Literature
214 The Western Way

JOHN PRESTON HOSKINS, PH.D., Berlin
Professor of Germanic Languages and Literature
22 Bank St.

MAX FRIEDRICH BLAU, PH.D., Leipsic
Professor of Germanic Languages and Literature
42 Princeton Ave.

GEORGE MADISON PRIEST, PH.D., Jena
Professor of Germanic Languages and Literature
10 Nassau St.

EDWIN WALTER KEMMERER, PH.D., Cornell
Professor of Economics and Finance
128 Fitz Randolph Road

*GEORGE BRINTON McCLELLAN, A.M., LL.D.
Professor of Economic History
Battle Road

*ARCHIBALD ALLAN BOWMAN, M.A., Glasgow
Professor of Logic

*PIERRE LEON BOUTROUX, D.Sc., Paris
Professor of Mathematics

CHARLES GROSVENOR OSGOOD, PH.D., Yale
Professor of English
92 Stockton St.

EDWARD GLEASON SPAULDING, PH.D., Bonn
Professor of Philosophy
8 Edgehill St.

ALAN WILFRID CRANBROOK MENZIES, PH.D., Chicago
Professor of Chemistry
187 Prospect Ave.

ALFRED NOYES, M.A.
Visiting Professor of English Literature, on the Murray Foundation

FRANK HENRY CONSTANT, C.E., D.Sc.
Professor of Civil Engineering
57 Battle Road

DANA CARLETON MUNRO, A.M., L.H.D.
Dodge Professor of Mediaeval History
119 Fitz Randolph Road

GEORGE HARRISON SHULL, PH.D., Chicago
Professor of Botany and Genetics
60 Jefferson Road

PHILIP MARSHALL BROWN, A.M.
Professor of International Law
9 Nassau Hall

*Absent in war service.

WARNER FITE, PH.D., Pennsylvania
Stuart Professor of Ethics
138 Fitz Randolph Road

GORDON HALL GEROULD, B.LITT. (OXON.)
Professor of English
341 Nassau St.

ROBERT KILBURN ROOT, PH.D., Yale
Professor of English
31 Chambers St.

CHARLES CARROLL MARDEN, PH.D., Johns Hopkins
Emory L. Ford Professor of Spanish
The Graduate College

EDWARD COOKE ARMSTRONG, PH.D., LL.D.
Professor of the French Language
The Graduate College

MAJOR HERBERT HOWLAND SARGENT, U. S. A.
Professor of Military Science and Tactics

PAUL JULES JOSEPH VAN DEN VEN, D. PHIL. et L., Louvain
Visiting Professor of Byzantine History and Literature
76 Murray Place

HENRY ROBINSON SHIPMAN, PH.D., Harvard
Assistant Professor, Class of 1881 Preceptor in History and Politics
27 Mercer St.

JOHN WILLIAM BASORE, PH.D., Johns Hopkins
Assistant Professor, John Rutherford Preceptor in Classics
101 Library Place

FREDERICK LEROY HUTSON, PH.D., Chicago
Assistant Professor
William Alfred Packard Preceptor in Classics
The Bachelors

NATHANIEL EDWARD GRIFFIN, PH.D., Johns Hopkins
Assistant Professor, John L. Cadwalader Preceptor in English
132 Mercer St.

†FRANCIS CHARLES MACDONALD, A.B.
Assistant Professor, Edgerstoune Preceptor in English
The Nassau Inn

FRANK LINLEY CRITCHLOW, PH.D., Johns Hopkins
Assistant Professor, Preceptor in Modern Languages
6 Mercer St.

WILLIAM KOREN, A.M.
Assistant Professor, Preceptor in Modern Languages
105 Fitz Randolph Road

*HARVEY WATERMAN THAYER, PH.D., Columbia
Assistant Professor, Preceptor in Modern Languages
12 Nassau St.

*MARCUS STULTS FARR, D.Sc., Princeton
Assistant Professor, Preceptor in Geology
20 Vandeventer Ave.

*WALTER MAXWELL ADRIANCE, A.M.
Assistant Professor, Earl Dodge Preceptor in Economics
Lawrenceville Road (Princeton, R. D. 2)

MORRIS WILLIAM CROLL, PH.D., Pennsylvania
Assistant Professor, Preceptor in English
6 North Reunion Hall

*LOUIS WARDLAW MILES, PH.D., Johns Hopkins
Assistant Professor, Preceptor in English
7 Greenholm

CHARLES RUFUS MOREY, A.M.
Assistant Professor, Preceptor in Art and Archaeology
342 Nassau St.

† Absent on leave.
*Absent in war service.

WILLIAM STARR MYERS, PH.D., Johns Hopkins
Assistant Professor
Robert Stockton Pyne Preceptor in History and Politics
104 Bayard Lane

*HEREWARD LESTER COOKE, M.A.
Class of 1898 Assistant Professor of Physics

PHILIP ELY ROBINSON, PH.D., Giessen
Assistant Professor of Physics
128 Broadmead

RAYMOND SMITH DUGAN, PH.D., Heidelberg
Assistant Professor of Astronomy
40 Patton Ave.

CHARLES RANALD MACINNES, PH.D., Johns Hopkins
Assistant Professor, Preceptor in Mathematics
12 Vandeventer Ave.

*GILBERT VAN INGEN
Assistant Professor of Geology
Curator of Invertebrate Palaeontology
115 Broadmead

*JOSEPH HENRY MACLAGAN WEDDERBURN. D.Sc.
Edinburgh
Assistant Professor, Preceptor in Mathematics

GEORGE TAPLEY WHITNEY, PH.D., Cornell
Assistant Professor, Preceptor in Philosophy
33 Jefferson Road

*CHARLES WILLIAM KENNEDY, PH.D., Princeton
Assistant Professor
Robert Stockton Pyne Preceptor in English
66 Battle Road

*DAVID ALOYSIUS McCABE, PH.D., Johns Hopkins
Assistant Professor, Preceptor in Economics
25 Patton Hall

*Absent in war service.

EDWIN FITCH NORTHRUP, PH.D., Johns Hopkins
Assistant Professor of Physics
30 Wiggins St.

*GEORGE WICKER ELDERKIN, PH.D., Johns Hopkins
Assistant Professor, Preceptor in Art and Archaeology
The Bachelors

DONALD PRITCHARD SMITH, PH.D., Göttingen
Assistant Professor of Chemistry
173 Nassau St.

DONALD CLIVE STUART, PH.D., Columbia
Assistant Professor, Preceptor in Modern Languages
The Western Way

JOHN STOUT VAN NEST, PH.D., Munich
Assistant Professor of Chemistry
Curator of Chemical Laboratories
37 Cleveland Lane

HAROLD HERMAN BENDER, PH.D., Johns Hopkins
Assistant Professor, Preceptor in Modern Languages
120 Fitz Randolph Road

*RADCLIFFE HEERMANCE, A.M.
Assistant Professor, Preceptor in English
Assistant Professor of Military Science and Tactics
114 Broadmead

ALLAN CHESTER JOHNSON, PH.D., Johns Hopkins
Assistant Professor, Preceptor in Classics
34 Bank St.

FREDERICK WILLIAM LUEHRING, PH.M.
Assistant Professor of Hygiene and Physical Education
110 New Moore St.

*Absent in war service.

HENRY CLAY McCOMAS, JR., PH.D., Harvard
Assistant Professor, Preceptor in Psychology
109 Broadmead

HERBERT SPENCER MURCH, PH.D., Yale
Assistant Professor, Preceptor in English
1 A, Campbell Hall

THOMAS JEFFERSON WERTENBAKER, PH.D., Virginia
Assistant Professor, Preceptor in History and Politics
111 Fitz Randolph Road

*OSWALD WHITMAN KNAUTH, PH.D., Columbia
Assistant Professor, Preceptor in Economics and Social Institutions

GEORGE ERLE BEGGS, A.B., C.E.
Assistant Professor of Civil Engineering
78 Jefferson Road

KARL TAYLOR COMPTON, PH.D., Princeton
Assistant Professor of Physics
58 Murray Place

DONALD BLYTHE DURHAM, PH.D., Princeton
Assistant Professor, Preceptor in Classics
72 University Place

CLIFTON RUMERY HALL, PH.D., Princeton
Assistant Professor, Preceptor in History and Politics
94 Bayard Lane

*WALTER PHELPS HALL, PH.D., Columbia
Assistant Professor, Preceptor in History and Politics
26 Prospect Ave.

CHALFANT ROBINSON, PH.D., Yale
Assistant Professor, Preceptor in History and Politics
55 Battle Road

ROBERT MAXWELL SCOON, B.A. (OXON.) PH.D., Columbia
Assistant Professor, Preceptor in Classics
19 Cleveland Lane

*Absent in war service.

‡EDMUND NEWTON HARVEY, PH.D., Columbia
Assistant Professor of Physiology
293 Nassau St.

*HUGH STOTT TAYLOR, D.Sc., Liverpool
Assistant Professor of Physical Chemistry
43 Graduate College

HENRY BARTLETT VAN HOESEN, PH.D., Princeton
Curator of Manuscripts, Assistant Librarian
30 Linden Lane

†JOHN BAUER, PH.D., Yale
Assistant Professor, Preceptor in Economics and Social Institutions
269 Nassau St.

NEIL CAROTHERS, PH.D., Princeton
Assistant Professor, Preceptor in Economics and Social Institutions
35 Park Place

LEWIS ROBINSON CARY, PH.D., Princeton
Assistant Professor of Biology
36 Wiggins St.

HENRY BRONSON DEWING, PH.D., Yale
Assistant Professor, Preceptor in Classics
12 Edgehill Street

HENRY BERNHARD DIRKS, B.S., M.E.
Assistant Professor of Civil Engineering
80 Jefferson Road

FRANK FRITTS, LL.B., PH.D., Princeton
Assistant Professor, Preceptor in History and Politics
Pyne Tower, Graduate College

HORACE CRAIG LONGWELL, PH.D., Strassburg
Assistant Professor, Preceptor in Philosophy
91 Mercer St.

‡ Absent on leave, first term.
* Absent in war service.
† Absent on leave.

WILLIAM JOHN SINCLAIR, PH.D., California
Assistant Professor, Preceptor in Geology
Curator of Vertebrate Palaeontology
Patton Ave.

NORMAN BROWN TOOKER, A.B., M.D.
Assistant Professor of Hygiene and Physical Education
30 Battle Road

ANSON ELY MORSE, PH.D., Princeton
Assistant Professor and Reference Librarian in History
269 Nassau St.

STEWART PATON, M.D.
Lecturer on Neuro-Biology
Greenlands

HENRY LANE ENO, A.B., LL.B.
Research Associate in Psychology
78 Stockton St.

ALFRED GOLDSBOROUGH MAYER, SC.D., Harvard
Lecturer on Biology
276 Nassau St.

*JAMES WADDELL ALEXANDER, PH.D., Princeton
Lecturer on Mathematics
34 Cleveland Lane

*MARION EPPLEY, A.M.
Lecturer on Chemistry
Edgerstoune

ALEXANDER RUSSELL, MUS.B.
Director of Music and University Organist
Graduate College

HENRY ANDREWS COTTON, M.D., University of Maryland
Lecturer on Psychopathology
State Hospital, Trenton, N. J.

---

*Absent in war service.

*CHARLES FREDERICK SILVESTER
Curator of the Zoölogical Museum
Assistant in Anatomy
26 Prospect Ave.

*PERCY ADDISON CHAPMAN, A.M.
Instructor in Modern Languages
6 A, Holder Hall

*KENNETH HAMILTON CONDIT, M.E., C.E.
Instructor in Civil Engineering
95 Library Place

CHARLES LESLIE FLEECE, A.M.
Instructor in Chemistry
54 Murray Place

HOWARD SEAVOY LEACH, A.M.
Acting Reference Librarian
Pyne Tower, Graduate College

THEODORE AUGUSTUS MILLER, A.M.
Instructor in Classics
52 Blair Hall

*DONALD LEROY STONE, LL.B., A.M.
Instructor in English
14 Dickinson St.

*BENJAMIN FRANKLIN HOWELL, A.M.
Instructor in Geology
Assistant Curator of Geology
52 Patton Ave.

*WILLIAM ORR McCONNELL, A.B.
Instructor in Modern Languages
22 Graduate College

*Absent in war service.

*EARL BALDWIN SMITH, PH.D., Princeton
Instructor in Art and Archaeology
24 Madison St.

*HARRY BRUCE WALLACE, PH.D., Jena
Instructor in Modern Languages
26 Prospect Ave.

ARTHUR NICHOLS YOUNG, PH.D., Princeton
Instructor in Economics and Social Institutions
43 Jefferson Road

*CARL CAMPBELL BRIGHAM, PH.D., Princeton
Instructor in Psychology
16 South West College

LEONARD PETER FOX, PH.D., Pennsylvania
Instructor in History and Politics
12½ Vandeventer Ave.

*NORMAN RICHARD FRENCH, A.M.
Instructor in Physics
11 B, Graduate College

*EDWARD ALLEN MACMILLAN, C.E.
Instructor in Geodesy
35 Park Place

*SHERLEY WARNER MORGAN, A.B., B. ARCH.
Instructor in Art and Archaeology
Pyne Tower, Graduate College

GEORGE ADAM PFEIFFER, PH.D., Columbia
Instructor in Mathematics
23 Madison St.

*ALBERT STARNES RICHARDSON, A.M.
Instructor in Organic Chemistry
36 Brown Hall, Seminary

*Absent in war service.

HERMAN LYLE SMITH, M.S.
Instructor in Mathematics
68 Wiggins Street

*HENRY HARMON STEVENS, PH.D., Harvard
Instructor in Modern Languages
24 Madison St.

EDWIN AVERY PARK
Instructor in Architectural Drawing
36 University Place

ASSISTANTS IN INSTRUCTION

CHARLES LEO MACY
Assistant in Botany
240 Nassau St.

BENJAMIN COE HELMICK, M.S.
Assistant in Genetics
238 Nassau St.

ROBERT MARTIN BURNS, A.M.
Assistant in Chemistry
2 A, Graduate College

WILLIAM THOMAS CALDWELL, A.M.
Research Assistant in Organic Chemistry
27 Vandeventer Ave.

HAROLD EUGENE CUDE, M.S.
Assistant in Chemistry
54 Murray Place

*Absent in war service.

OFFICERS OF ADMINISTRATION

JOHN GRIER HIBBEN, PH.D., LL.D., LITT.D.
President
Nassau Hall

ANDREW FLEMING WEST, PH.D., LL.D.
HON. D.LITT. (OXON.)
Dean of the Graduate School
3 Nassau Hall

HENRY BURCHARD FINE, PH.D., LL.D.
Dean of the Departments of Science
73 Library Place

WILLIAM FRANCIS MAGIE, PH.D., LL.D.
Dean of the Faculty
The Dean's House

HOWARD McCLENAHAN, E.E., M.S., LL.D.
Dean of the College
214 Nassau Hall

HENRY GREEN DUFFIELD, A.B.
Treasurer
Stanhope Hall

VARNUM LANSING COLLINS, A.M.
Acting Secretary
312 Nassau Hall

GEORGE CLARENCE WINTRINGER, E.E.
Secretary of Business Administration
Stanhope Hall

CHARLES HODGE JONES, A.B.
Registrar
212 Nassau Hall

JOHN SAVILLE COSGRAVE
Assistant to the Treasurer
Stanhope Hall

*ROSWELL DAVIS, B.S.
Superintendent of Grounds and Buildings
Stanhope Hall

JOHN McDOWELL CARNOCHAN, M.D.
University Physician
McCosh Infirmary

HELEN GROSS, R.N.
Infirmarian
McCosh Infirmary

GEORGE McFARLANE GALT, A.B.
Secretary of the Bureau of Student Self-Help
32 Mercer St.

WILLIAM JAMES COAN
Proctor
2 N.M.R.

*Absent in war service.

*STANDING COMMITTEES OF THE FACULTY

Clerk of the Faculty: PROFESSOR V. L. COLLINS.

Course of Study: THE PRESIDENT, Chairman; PROFESSORS ABBOTT, CONKLIN, EISENHART, FINE, FITE, HARPER, KEMMERER, W. F. MAGIE (Secretary), MCCAY, MUNRO, PHILLIPS, D. C. STUART, WEST.

Discipline: DEAN MCCLENAHAN, Chairman; PROFESSORS HEERMANCE, PHILLIPS, PRIEST, SCOON, TROWBRIDGE.

Entrance: PROFESSOR HOSKINS, Chairman; PROFESSORS BUFFUM (Secretary), GEROULD, A. C. JOHNSON, MACINNES, MCCLENAHAN, MYERS, ROBBINS, D. SMITH.

Library: DR. E. C. RICHARDSON, Chairman; PROFESSORS COMPTON, CRITCHLOW, CORWIN, R. B. C. JOHNSON, MCCLURE, MACDONALD, DAVID MAGIE, MARDEN, MATHER, MENZIES, RUSSELL, VANINGEN, VEBLEN.

Music: PROFESSOR SPAETH, Chairman; PROFESSORS BASORE (Secretary), BROWN, BUTLER, ALEXANDER RUSSELL.

Non-Athletic Organizations: PROFESSOR GEROULD, Chairman; PROFESSORS CROLL, DAVID MAGIE, SHIPMAN, D. C. STUART (Secretary), THAYER, THOMPSON.

Examinations and Standing: DEAN MAGIE, Chairman; PROFESSORS BENDER, BUFFUM, CONSTANT, FOSTER, MCCLENAHAN, MACINNES, PRIEST, ROOT, VREELAND, MR. JONES (Secretary).

Graduate School: DEAN WEST, Chairman; PROFESSORS CAPPS, CONKLIN, CORWIN, EISENHART, FETTER, GAUSS, HULETT, W. F. MAGIE, MARQUAND, PARROTT, SMYTH, SPAULDING.

Out-door Sports: DEAN MCCLENAHAN, Chairman, PROFESSORS FINE, HUTSON, MCCLURE, RAYCROFT, SPAETH.

Public Lectures: PROFESSOR BROWN, Chairman, PROFESSORS COLLINS, FORD, MCELROY, OSGOOD (Secretary), P. VAN DYKE, VANINGEN.

---

* For office hours see page 8.

University Extension: PROFESSORS COLLINS, CROLL, DAHLGREN, MCCOMAS, MYERS, PRENTICE, SPAETH, YOUNG.

Teaching Appointments: PROFESSORS ADRIANCE, DEWING, HULETT, PHILIP ROBINSON, VEBLEN, MR. JONES.

Conference: PROFESSOR ABBOTT, Chairman; PROFESSORS CONKLIN, FITE, KEMMERER, OSGOOD (Secretary), TROWBRIDGE, WESTCOTT.

Preceptorial: PROFESSOR SHIPMAN, Chairman; PROFESSORS BLAU, HARPER, R. B. C. JOHNSON, MCCABE, D. R. STUART, VAN NEST, WERTENBAKER (Secretary).

Sanitation (advisory to the Trustees Committee on Grounds and Buildings): PROFESSOR RAYCROFT, Chairman; DR. FINNEY, PROFESSORS CONKLIN and LOOMIS, DR. PATON, MR. WINTRINGER (Secretary).

Military: PROFESSOR RAYCROFT, Chairman; PROFESSORS BROWN (Secretary), HEERMANCE, LIBBEY, ROOT, TROWBRIDGE, THOMPSON.

Attendance: DEAN MCCLENAHAN, Chairman.

Honorary Degrees: PROFESSORS CAPPS, MUNRO, SCOTT.

ADVISORY COUNCIL OF THE FACULTY

PRESIDENT HIBBEN, Chairman; PROFESSORS ABBOTT, CONKLIN, CONSTANT, FETTER, FINE, FITE, GAUSS, HUNT, MCCAY, MARQUAND, MUNRO, RAYCROFT, RUSSELL, SCOTT.

GRADUATE COUNCIL DEPARTMENTS CONFERENCE COMMITTEES

Economics and Social Institutions: GEORGE C. FRASER '93, *Chairman;* ADRIAN H. LARKIN '87, BENJAMIN STRONG, JOHN A. CAMPBELL '77, FREDERICK STRAUSS.

Classics: ARTHUR H. SCRIBNER '81, *Chairman;* PHILIP A. ROLLINS '89, FRANK A. VANDERLIP, PAUL D. CRAVATH.

History and Politics: FREDERICK P. KING '00, *Chairman;* A. G.

TODD '84, C. W. HALSEY '98, ROBERT LANSING, CHARLES D. NORTON, WILLIAM M. SLOANE.

Astronomy: JOHN LARKIN '82, *Chairman;* A. A. GULICK '97, A. D. RUSSELL.

Geology and Palaeontology: PHILIP A. ROLLINS, '89, *Chairman;* FRANCIS SPEIR '77.

Civil Engineering: WILBUR C. FISK '90, *Chairman;* KNOX TAYLOR '95, WILLIAM P. FIELD '83, GABRIEL S. BROWN '94, FRANCIS O. BLACKWELL '87, JASPER CRANE '01, DICKSON Q. BROWN '95, CHARLES H. HIGGINS '03, GENERAL GEORGE W. GOETHALS.

Chemistry: CHARLES A. MUNN '81, *Chairman;* EMORY L. FORD '96, CHARLES H. HIGGINS '03.

PART II

HISTORY AND GOVERNMENT OF THE UNIVERSITY

HISTORY AND GOVERNMENT OF THE UNIVERSITY

At the beginning of the eighteenth century there were but three institutions of higher learning in the colonies: Harvard and Yale in New England and the College of William and Mary in Virginia.

In 1739 a movement was set on foot by the Synod of Philadelphia to establish a college in the Middle Colonies and a committee was appointed to carry out the plan; but, the time not being propitious, the project was laid aside without any material progress. In the meantime the Log College, founded in 1726 near the Forks of Neshaminy, Pennsylvania, by the Rev. William Tennent, Sr., a graduate of Edinburgh University and a member of the Synod of Philadelphia, had been successfully conducted as a school for candidates for the ministry. Mr. Tennent died in 1746, and at that time the project for the erection of a college, to rank with Harvard, Yale, and William and Mary, was again taken up by its adherents, who had withdrawn from the Synod of Philadelphia and had formed the Synod of New York. The project was successfully carried out and a charter was granted to the applicants, passing the great seal of the Province of New Jersey on October 22, 1746, attested by Acting Governor John Hamilton, of His Majesty's Council. The original trustees named in this instrument were Messrs. William Smith, Peter Van Brugh Livingston, and William Peartree Smith, and the Reverends Jonathan Dickinson, John Pierson, Ebenezer Pemberton, and Aaron Burr. By the terms of the charter these seven trustees were empowered to choose five others to complete

the Board; and, knowing the hearty favor with which the friends of the Log College viewed the movement, they elected the Reverends Gilbert Tennent, William Tennent, Jr., Samuel Blair, and Samuel Finley, graduates of the Log College, and Richard Treat, graduate of Yale College, who lived at Abington, near the Log College, to fill the vacancies.

The charter of 1746 is not of record, although a memorandum of its grant appears among the records of charters and commissions in the office of the Secretary of State at Trenton, New Jersey, and its substance is set forth in an advertisement which appeared in the *Pennsylvania Gazette* of August 13, 1747.

In the summer of 1747 Jonathan Belcher, Esq., the newly appointed Governor of New Jersey, arrived in the Colony and at once manifested the deepest interest in the infant college. The original charter not being entirely satisfactory, Governor Belcher granted a second, which passed the seal of the Province on September 14, 1748. This second charter had been sought by the original Trustees in order to increase their number, to give other religious communions a share in the administration, and to make the lay trustees equal in number to those who were clergymen. Numerous doubts, besides, had been expressed as to the validity of the first charter, which had been granted by the President of the Council, then acting as governor, and which had never been recorded *verbatim* in the records of the Secretary of State. The interest taken by Governor Belcher in the affairs of the institution and the wise forethought of its founders, by the execution of the second and more comprehensive document, effectually removed all doubts as to the validity of their powers. After the Revolution this charter was confirmed and renewed by the Legislature of the State of New Jersey.

Upon the granting of the first charter measures had at

once been taken to open the College, and on February 2, 1747, a notice appeared in the *New York Gazette Revived in the Weekly Post Boy,* notifying "any Person or Persons who are qualified by preparatory Learning for Admission, that some time in May next at latest, they may be there admitted to an Academic Education." On April 20, the following notice was given through the same journal:

> This is to inform the Publick, That the Trustees of the College of New Jersey, have appointed the Reverend Mr. Jonathan Dickinson, President of the said College; which will be opened the fourth week in May next, at Elizabeth-Town: At which Time and Place, all Persons suitably qualified, may be admitted to an Academic Education.

Hatfield, in his *History of Elizabeth,* states that "the first term of the College of New Jersey was opened at Mr. Dickinson's house, on the south side of the old Rahway road, directly west of Race street." President Dickinson's term of administration was brief, commencing in April 1747, and closing with his death on October 7, 1747. Upon his decease the Rev. Aaron Burr assumed charge of the College, which was removed from Elizabethtown to Newark. To Mr. Burr belongs the credit for the organization of the curriculum, the ceremonies of the College, and its discipline.

The first Commencement was held at Newark, November 9, 1748, and was celebrated with much ceremony. The *New York Gazette Revived in the Weekly Post Boy* published an account of the proceedings of this Commencement in detail, together with the inaugural address of President Burr, in which address he emphasized broad and liberal education as the firmest foundation of the Commonwealth, and concluded with a eulogy of the generosity of their patron, Governor Belcher. The graduating class numbered six.

A set of laws for the government of the College, probably prepared by Burr, was adopted by the Trustees at this time. One, relating to the admission of students, gives a fair idea of the entrance requirements of the period:

1. None may be expected to be admitted into College but such as being examined by the President and Tutors shall be found able to render Virgil and Tully's Orations into English; and to turn English into true and grammatical Latin; and to be so well acquainted with the Greek as to render any part of the four Evangelists in that language into Latin or English; and to give the grammatical connection of the words.

The Trustees also resolved "That the annual Commencement for the future be on the last Wednesday of September, and the next Commencement be held at New Brunswick."

The need of funds being urgent, application was made to the Provincial Assembly for authority to raise by a lottery a sum not exceeding eight thousand dollars; but the request was denied and the lottery was transferred to Philadelphia. Several years later, in 1761-2, the Assembly granted this privilege, as did also the General Court of Connecticut (1753-4).

In casting about for a desirable site for the location of the institution, the situation of Princeton at once commended itself. Not only was it midway between the cities of New York and Philadelphia and its one street a part of the great highway between them, but it occupied a central position upon rising ground, insuring healthful surroundings, on the line dividing East and West Jersey. New Brunswick, because of its greater size and somewhat similar though not so favorable location, claimed the first consideration; but the Trustees, well aware of the pecuniary value of a college to any town in which it should be placed, were desirous of securing the full advantage accruing from this fact, and voted, September 26, 1750:

That a proposal Be made to the Towns of Brunswick and Prince-Town to try what Sum of Money They can Raise for Building of the College by the next meeting that the trustees may Be Better able to Judge in Which of these places to fix the place of the College.

At the next meeting of the Board, held in Trenton, May 15, 1751, the following resolution was adopted:

Voted that New Brunswick be ye Place for the Building of the College, provided the Inhabitants of sd. Place agree with the Trustees upon the following Terms, Viz. that they secure to the College a Thousand Pounds proc. Money, ten acres of land contiguous to the College, and two hundred acres of Wood Land, the furthest Part of it not to be more than three Miles distant from the Town; or such a Quantity of Wood Land as the Trustees of the College shall judge Equivalent to two hundred Acres of Wood Land offered to be given by some gentleman in Prince Town.

Mr. Jonathan Sergeant, the Treasurer, was ordered to view the land at Princeton and New Brunswick and report to the Board. The citizens of the latter place do not appear to have been eager to accept the terms imposed by the Board, and failing to comply by the time allowed, it was voted, September 27, 1752:

That the College be fixed at Princeton upon Condition that the Inhabitants of sd. Place secure to the Trustees that two Hundred Acres of Woodland, and that ten Acres of clear'd Land which Mr. Sergeant view'd; and also one thousand Pounds proc. Money.

This action finally settled the question of location, and, the citizens of the town having complied with the terms proposed by the Board, steps were at once taken for the erection of the first college building. The plans drawn by Dr. Shippen and Robert Smith were accepted by the Trustees. These, according to the minutes of July 22, 1754, specified "That the College be built of Brick if good Brick

can be made at Princeton & if Sand can be got reasonably cheap. That it be three story high & without any Cellar"; but at a subsequent meeting it was decided that stone be used for the College edifice. The land for this building was given by Nathaniel Fitz Randolph, who also donated twenty pounds currency. Ground was broken on the 29th of July, 1754, under the direction of Joseph Morrow, and soon afterwards the corner-stone was laid, in the presence of Thomas Leonard, John Stockton, John Horner, William Worth (stone mason), Nathaniel Fitz Randolph, and many others. It was the desire of the Trustees to name the new building after the patron and benefactor of the College, Governor Belcher, but declining the compliment he requested the Board to call the edifice "Nassau Hall," as expressing "the Honour we retain, in this remote Part of the Globe to the immortal Memory of the Glorious King William the 3d., who was a Branch of the illustrious House of NASSAU." This request was complied with in the following terms:

Whereas his Excellency Govr. Belcher has signified to us, his declining to have the Edifice we have lately erected at Princeton for the Use and Service of New-Jersey College to be called after his Name, and has desired and for Good Reasons that it should be call'd after the Name of the illustrious House of NASSAU; It is therefore voted, and is hereby ordered that the sd. Edifice be in all Time to come called and be known by the Name of NASSAU HALL.

The College was completed and the students removed from Newark to Princeton in the fall of 1756. The expenses incurred consequent upon the erection of so considerable a building, then the largest structure of its kind in the colonies, had prompted the Board, in 1753, to send the Rev. Gilbert Tennent and the Rev. Samuel Davies to Great Britain to solicit funds in behalf of the institution.

This undertaking was successful, and the money acquired sufficient to defray in part the cost of the building.

The death of President Burr occurred September 24, 1757, and three days later the Trustees at their stated meeting elected the Rev. Jonathan Edwards, of Stockbridge, Massachusetts, to fill the vacancy.

President Edwards arrived at Princeton on the 16th of February, 1758, and assumed the duties of his office. One week later he was inoculated for small-pox and died on the 22nd of March.

On the 9th of May, 1759, the Rev. Samuel Davies was elected to the presidency and on the 26th of July entered upon the duties of his office. He died February 4, 1761.

During his administration there were no material changes in the course of instruction; more attention, however, was given to the cultivation of English composition and elocution. President Davies gave much of his time to the building up of a suitable library for the College.

The Rev. Samuel Finley had been proposed for the presidency at the meeting at which Mr. Davies was elected, and upon the death of the latter he was unanimously chosen as his successor. His administration lasted until the 17th of July, 1766, the date of his death. During this period the course of instruction remained the same as in former years, and the College maintained a steady growth.

On the 19th of November, 1766, the Trustees elected to the presidency, John Witherspoon, D.D., LL.D., of Paisley, Scotland. Dr. Witherspoon at first declined; a year later, however, he accepted a reëlection and became sixth President of the College.

Dr. Witherspoon arrived in America during the summer of 1768 and was inaugurated on the 17th of August. The shadow of the approaching Revolution was already spread-

ing over the colonies, and among the students of this period were many who became leading figures in the great struggle and in the solution of the constitutional problem which at the close of the war offered itself to every thoughtful mind. James Madison, Aaron Burr, Gunning Bedford, William Bradford, Philip Freneau, Hugh Henry Brackenridge, Henry Lee, Morgan Lewis, and Henry Brockholst Livingston were some of the pupils over whom Witherspoon was called to preside.

For nearly eight years the varying fortunes of the Revolution told heavily on the College. The course of instruction was interrupted by the presence of both armies, Nassau Hall was wrecked, the library scattered and destroyed, and the philosophical apparatus, including the famous orrery made by David Rittenhouse of Philadelphia, ruined. During this period but one Commencement was omitted, that of 1777. The members of the graduating class of that year, seven in number, received their degrees a few months later and are accounted graduates for that year.

College orders were regularly resumed after the enemy had abandoned his occupation of the State, although, according to President Witherspoon's report, given through the press in 1779, the number of students did not at any time exceed ten.

The impoverished condition of the country, consequent upon the war, laid a heavy burden upon the shoulders of the President and Trustees. Great credit is due to the perseverance and untiring energy displayed by President Witherspoon throughout his administration in meeting and overcoming these difficulties. He died November 15, 1794.

His successor, Samuel Stanhope Smith, D.D., L.L.D., a graduate of the College in the Class of 1796, was elected

to the presidency May 6, 1795. During his term of office the course of instruction was broadened and the curriculum enlarged. Among the more important changes was the establishment of professorships in chemistry and in natural history. This was the first provision for regular instruction in these branches of science made by an American college. A grant of six hundred pounds per annum for three years was secured from the Legislature of the State, to reimburse the College for the damage sustained to its buildings, library, and philosophical apparatus during the Revolution. This appropriation, however, was not equal by a thousand dollars to the expense of repairing the philosophical apparatus.

On the 6th of March, 1802, Nassau Hall, save for the outer walls, was destroyed by fire, together with almost the entire library and part of the philosophical apparatus. Steps were at once taken to raise funds wherewith to repair the loss, and an elaborate address "To the Inhabitants of the United States" was issued by the Trustees. In this appeal they were so far successful that by the 4th of April, 1804, more than forty-four thousand dollars had been collected. The rebuilding of Nassau Hall was completed during the summer of 1804.

Dr. Smith resigned the presidency August 14, 1812, and was succeeded by Ashbel Green, D.D., L.L.D., of the Class of 1783. Dr. Green tendered his resignation to the Trustees September 25, 1822. During this period of ten years the institution maintained a steady growth, both in the number of students and in the income from its invested funds.

On the 26th of September, 1822, the Trustees elected to the presidency the Rev. John Holt Rice, of Richmond, Virginia. Dr. Rice, being in poor health, declined and the duties of the office for a time devolved upon the Vice-President, Philip Lindsley of the Class of 1804.

James Carnahan, D.D., LL.D., of the Class of 1800, was elected on the 12th of May, 1823, and was inaugurated President on August 6th of that year. President Carnahan's term of office was one of marked increase in the growth and development of the College. During his administration of thirty-one years, sixteen hundred and thirty-four students were graduated from the institution; the teaching corps was increased from two professors and two tutors, in 1823, to six professors, two assistant professors, and four tutors in 1854; and not less than seventy-five thousand dollars was expended in the erection of new buildings, the purchase of apparatus and books, and the improvement of the College grounds.

A department of law was established in 1846, under the direction of the Hon. Joseph C. Hornblower (hon. 1823), Chief Justice of the Supreme Court of New Jersey, James S. Green (hon. 1818), and Richard S. Field of the Class of 1821, Attorneys. The degree of Bachelor of Laws was given for two years' resident study. There being no funds available for the support of this department, the lectures were abandoned in 1852. During this period the degree of Bachelor of Laws was conferred upon seven persons.

President Carnahan resigned in 1853, but upon the request of the Board retained office until the Commencement of 1854.

John Maclean, D.D., LL.D., of the Class of 1816, was elected to the presidency December 20, 1853, and inaugurated Wednesday, June 28, 1854. Dr. Maclean resigned December 11, 1867, retaining the office until the Commencement of 1868. During this period the number of students increased from 247 in 1854 to 281 in 1868. The Civil War deprived the institution of a large proportion of its students and is largely responsible for the small increase. Four new

professorships were established, with a total endowment of $195,000, and the teaching corps increased to twenty. The movement to establish free scholarships in the College, undertaken during the last years of President Carnahan's administration, was successful in obtaining $60,000. The interior of Nassau Hall was destroyed by fire for the second time on the night of the 10th of March, 1855. The damage to the building, the walls alone standing, amounted to above $50,000 upon which there was an insurance of $12,000. The work of rebuilding Nassau Hall was completed during the spring of 1860.

James McCosh, D.D., LL.D., Litt.D., of Queen's College, Belfast, was elected President of the College on the 29th of April, 1868. Dr. McCosh resigned the office in 1888, after an administration of twenty years. Under President McCosh the number of students increased from 281 in 1868 to 603 in 1887. Gifts amounting to upwards of three millions of dollars were contributed during this period, of which one million was expended in the erection of fourteen buildings. Among the more important changes in the curriculum were the introduction of the system of elective studies (1870); the founding of John C. Green School of Science (1873) offering courses leading to the degree of Bachelor of Science, Civil Engineer, and Master of Science; and the establishment of the Graduate Department (1877). The Faculty was enlarged from ten professors and seven tutors in 1868 to thirty-one professors, four assistant professors, and five tutors and instructors—a total of forty—in 1888.

Francis Landey Patton, D.D., LL.D., twelfth President of the College, was elected February 9, 1888, and inaugurated June 20, 1888. President Patton resigned the office June 9, 1902. During his administration of fourteen years

the student enrollment increased from 603 in 1888 to 1354 in 1902. The School of Electrical Engineering was established in 1889. The Faculty numbered forty in 1888; in 1902 one hundred. Seventeen new buildings were erected during President Patton's incumbency.

In October, 1896, the one hundred and fiftieth anniversary of the signing of the First Charter of the College of New Jersey was celebrated; on the anniversary day, October 22, 1896, the title of Princeton University was assumed.

In 1900 a plan of Alumni Representation in the Board of Trustees was adopted, whereby the Board was enlarged by the addition of five Alumni Trustees, who hold office for a term of five years, and are eligible for reëlection. One Alumni Trustee is elected each year.

Woodrow Wilson, Ph.D., Litt.D., LL.D., of the Class of 1879 was elected to the presidency in June, 1902, and inaugurated on the 25th of October of the same year. President Wilson resigned October 20, 1910, having accepted the Democratic nomination for Governor of New Jersey. During his administration the undergraduate course of study was revised; the Preceptorial Method of instruction was established, thereby adding about fifty members to the teaching staff; the Faculty was further strengthened by the addition of a considerable number of professors distinguished in their several departments of study; the facilities of the University for both classroom and laboratory work were greatly increased by the building and equipment of a handsome recitation hall and of unusually large and adequate laboratories for physics, electrical engineering, biology, and geology; several new dormitories were erected; and large endowments were received for the development of the Graduate School.

On October 20, 1910, the Hon. John Aikman Stewart, LL.D., Senior Trustee, was appointed President *pro tempore,* by resolution of the Board of Trustees. President Stewart held the office until the election of President Hibben, January 11, 1912. During his administration he was aided in the performance of the academic duties of the presidency by Henry Burchard Fine, Ph.D., LL.D., Dean of the Faculty.

John Grier Hibben, Ph.D., LL.D., of the Class of 1882, was elected President of the University on January 11, 1912, and formally inaugurated on May 11 of the same year.

The title of the Corporation as now constituted is The Trustees of Princeton University.

UNIVERSITY SEAL

The seal of the University is a shield resting upon a circle; in the upper part of the shield is an open Bible with Latin characters signifying the Old and New Testament; in the lower part a chevron, denoting the rafters of a building; in the spaces between the sides of the shield and the circle the motto "Dei sub numine viget"; on the outside of the circle, "Sigillum Universitatis Princetoniensis."

By resolution of the Board of Trustees, the use of the seal of the University is prohibited on all publications, manufactured articles, etc., except where specially authorised by the University.

FORM OF BEQUEST

I give and bequeath to the Trustees of Princeton University, located at Princeton, in the State of New Jersey, the sum of.....dollars, the same to be free from succession tax, if any should exist thereon, and to be used as the Board of Trustees shall determine (or, in the case of a special gift, stating the terms of the gift).

PART III

TERMS OF ADMISSION

TERMS OF ADMISSION TO PRINCETON UNIVERSITY

ENTRANCE EXAMINATIONS

Candidates for admission to the freshman class of Princeton University presenting themselves for examination in June, whether under the Old or the New Plan, will take the examinations of the College Entrance Examination Board. Candidates are required to submit the testimonials as to character and general fitness described in a subsequent paragraph. The latter testimonial shall state definitely the amount of work done in each subject offered for examination.

A list of places at which examinations are to be held by the College Entrance Examination Board in June will be published about March 1. Requests that examinations be held at particular points, to receive proper consideration should be transmitted to the Secretary of the Board not later than February 1.

Applications for the Board's examinations should be made in accordance with the instructions printed below.

In September entrance examinations for admission to Princeton University will be held, as heretofore, *in Princeton only* in accordance with the schedule printed on page 70.

Each candidate admitted to any class in the University shall pay an admission fee of five dollars.

COLLEGE ENTRANCE BOARD EXAMINATIONS

The Old Plan of Admission

In June, 1918, the "Application for Examination" and the "Recommendation of the Teacher" will be made on separate forms and the "Application for Examinations" will be required a week earlier than in previous years.

All applications for examinations must be addressed to the Secretary of the College Entrance Examination Board, 431 W. 117th St., New York, N. Y., and must be made upon a blank form to be obtained upon application to the Secretary of the Board.

If the application is received sufficiently early, the examination fee will be $5.00 for candidates examined in the United States and Canada and $15.00 for candidates examined outside of the United States and Canada. The fee should be remitted by postal order, express order, or draft on New York to the order of the College Entrance Examination Board.

The applications and fees of candidates who wish to be examined outside of the United States and Canada must reach the Secretary of the Board at least six weeks in advance of the first day of the examinations, that is, on or before Monday, May 6, 1918.

The applications and fees of candidates who wish to be examined in the United States at points west of the Mississippi River, or in Canada, must be received at least four weeks in advance of the examinations, that is, on or before Monday, May 20, 1918.

The applications and fees of candidates who wish to be examined in the United States at points east of or on the Mississippi River must be received at least three weeks in advance of the first day of the examinations, that is, on or before Monday, May 27, 1918.

When the candidate has failed to obtain the required blank form of application for examination, the usual examination fee will be accepted if the fee arrive not later than the specified date, accompanied by a memorandum containing the name and address of the candidate, the examination centre at which he wishes to present himself, and a list of all the subjects in which he may have occasion to take the Board's examinations.

Applications received later than the dates named will be accepted when it is possible to arrange for the admission of the candidates concerned, but only upon payment of $5.00 in addition to the usual fee.

In June 1918 the schedule of the examinations will be as follows:

Monday, June 17

8.45 A. M.—9.30 A. M.

PERIOD FOR REGISTRATION OF CANDIDATES

9.30 A. M.—12.30 P. M.

Mathematics *A*, Elementary Algebra complete (three hours)
Mathematics *A1*, Algebra to Quadratics (two hours)
Mathematics *A2*, Quadratics and Beyond (two hours)
COMPREHENSIVE MATHEMATICS (three hours)

1.45 P. M.—2 P. M.

PERIOD FOR REGISTRATION OF CANDIDATES

2 P. M.—6 P. M.

Mathematics *CD*, Plane and Solid Geometry combined (three hours)
Mathematics C, Plane Geometry (two hours)
Mathematics *D*, Solid Geometry (two hours)

Tuesday, June 18

8.45 A. M.—9 A. M.

PERIOD FOR REGISTRATION OF CANDIDATES

9 A. M.—1 P. M.

English *1*, Grammar and Composition (two hours)
English *2*, Literature (two hours)
COMPREHENSIVE ENGLISH (three hours)

1.45 P. M.—2 P. M.

PERIOD FOR REGISTRATION OF CANDIDATES

2 P. M.—6 P. M.

Mathematics *F*, Plane Trigonometry (two hours)

Wednesday, June 19

8.45 A. M.—9.30 A. M.

PERIOD FOR REGISTRATION OF CANDIDATES

9 A. M.—1 P. M.

Latin *2*, Elementary Prose Composition (one hour)
Latin *4*, Cicero and Sight Translation of Prose (two hours)
Latin *124*, Latin 1, 2, and 4 combined (three hours)
COMPREHENSIVE LATIN (three hours)

1.45 P. M.—2 P. M.

PERIOD FOR REGISTRATION OF CANDIDATES

2 P. M.—6 P. M.

Latin *3*, Second Year Latin (two hours)
Latin *5*, Vergil and Sight Translation of Poetry (two hours)
COMPREHENSIVE CHEMISTRY (three hours)

Thursday, June 20

8.45 A. M.—9.30 A. M.

PERIOD FOR REGISTRATION OF CANDIDATES

9 A. M.—1 P. M.

History *A*, Ancient (two hours)
History *B*, Mediaeval and Modern (two hours)
History *C*, English (two hours)
History *D*, American and Civil Government (two hours)
History *E*, Modern European (two hours)
COMPREHENSIVE HISTORY (three hours)

1.45 P. M.—2 P. M.

PERIOD FOR REGISTRATION OF CANDIDATES

2 P. M.—6 P. M.

French *A*, Elementary—First and Second Years (two hours)
French *B*, Intermediate—Third Year (two hours)
Spanish, Elementary—First and Second Years (two hours)
COMPREHENSIVE FRENCH (three hours)
COMPREHENSIVE SPANISH, (three hours)

Friday, June 21

8.45 A. M.—9 A. M.

PERIOD FOR REGISTRATION OF CANDIDATES

9 A. M.—1 P. M.

German *A*, Elementary—First and Second Years (two hours)
German *B*, Intermediate—Third Year (two hours)
COMPREHENSIVE GERMAN (three hours)

1.45 P. M.—2 P. M.

PERIOD FOR REGISTRATION OF CANDIDATES

2 P. M.—6 P. M.

Chemistry (two hours)
Physics (two hours)
COMPREHENSIVE PHYSICS (three hours)

Saturday, June 22

8.45 A. M.—9 A. M.

PERIOD FOR REGISTRATION OF CANDIDATES

9 A. M.—1 P. M.

Greek *A1*, Grammar (one hour)
Greek *A2*, Elementary Composition (one hour)
Greek *BG*, Xenophon and Sight Translation (two hours)
COMPREHENSIVE GREEK (three hours)

1.45 P. M.—2 P. M.

PERIOD FOR REGISTRATION OF CANDIDATES

2 P. M.—4 P. M.

Greek *C*, Homer's Iliad (two hours)

The New Plan of Admission

Candidates who wish to take the Board's comprehensive examinations under the New Plan of Admission must make application on a blank form to be obtained from the Secretary of the College Entrance Examination Board, 431 West 117th St., New York, N. Y. No application to take these examinations can be entertained by the College Entrance

Examination Board unless the candidate has previously obtained permission from the Committee on Entrance of Princeton University. In this permission must be specified the particular examinations to be taken by the candidate. In view of the fact that the candidate's application to the College Entrance Examination Board must reach the Secretary of the Board on or before a certain specified date, it will be necessary for the candidate to obtain this permission from the college at a still earlier date.

If the application is received by the College Entrance Examination Board sufficiently early, the examination fee will be $5.00 for candidates examined in the United States and Canada and $15.00 for candidates examined outside the United States and Canada. The fee should be remitted by postal order, express order, or draft on New York, payable to the College Entrance Examination Board.

The applications and fees of candidates who wish to be examined outside of the United States and Canada must reach the Secretary of the Board at least six weeks in advance of the first day of the examinations, that is, on or before Monday, May 6, 1918.

The applications and fees of candidates who wish to be examined in the United States at points west of the Mississippi River, or in Canada, must be received at least four weeks in advance of the examinations, that is, on or before Monday, May 20, 1918.

The applications and fees of candidates who wish to be examined in the United States at points east of or on the Mississippi River must be received at least three weeks in advance of the first day of the examinations, that is, on or before Monday, May 27, 1918.

Applications received later than the dates named will be accepted when it is possible to arrange for the admission of the candidates concerned, but only upon payment of $5.00 in addition to the usual fee.

The schedule of comprehensive examinations for candidates under both the Old and the New Plans of Admission in June 1918 will be found on page 63-65.

PARTIAL LIST OF EXAMINATION CENTERS FOR JUNE, 1918

The following list, which is given to forestall a considerable number of inquiries, contains some of the more important places at which the Board will hold examinations in June, 1918:

ALABAMA, Birmingham.
ARKANSAS, Little Rock.
CALIFORNIA, Berkeley, Los Angeles.
COLORADO, Denver.
CONNECTICUT, Bridgeport, Danbury, Derby, Hartford, Middletown, New Haven, Norwich, South Norwalk, Stamford, Waterbury, Winsted.
DELAWARE, Wilmington.
DISTRICT OF COLUMBIA, Washington.
FLORIDA, Jacksonville.
GEORGIA, Atlanta, Savannah.
IDAHO, Boise.
ILLINOIS, Chicago, Peoria.
INDIANA, Indianapolis.
IOWA, Davenport, Des Moines, Dubuque.
KENTUCKY, Louisville.
LOUISIANA, New Orleans.
MAINE, Bangor, Portland.
MARYLAND, Baltimore.
MASSACHUSETTS, Amherst, Beverly, Boston, Cambridge, Fall River, Fitchburg, Great Barrington, Lowell, New Bedford, Newburyport, Northampton, South Hadley, Springfield, Tufts College, Wellesley, Williamstown, Worcester.

MICHIGAN, Detroit.
MINNESOTA, Minneapolis.
MISSOURI, Kansas City, St. Louis.
MONTANA, Butte, Helena.
NEBRASKA, OMAHA.
NEW HAMPSHIRE, Concord, Hanover, Manchester.
NEW JERSEY, Asbury Park, East Orange, Montclair, Newark, New Brunswick, Passaic, Plainfield, Princeton, Trenton.
NEW YORK, Albany, Brooklyn, Buffalo, Elmira, Ithaca, New York, Peekskill, Poughkeepsie, Rochester, Syracuse, Utica.
NORTH CAROLINA, Asheville.
OHIO, Cincinnati, Cleveland, Columbus, Dayton, Toledo, Youngstown.
OREGON, Portland.
PENNSYLVANIA, Erie, Harrisburg, Philadelphia, Pittsburgh, Reading, Scranton.
RHODE ISLAND, Newport, Providence, Westerly.
SOUTH CAROLINA, Charleston.
TENNESSEE, Memphis, Nashville.
TEXAS, Austin, Dallas, El Paso, Houston.
UTAH, Salt Lake City.
VERMONT, Bellows Falls, Burlington, Rutland.
VIRGINIA, Richmond, Roanoke.
WASHINGTON, Seattle, Spokane.
WISCONSIN, Milwaukee.
HAWAII, Honolulu.

SEPTEMBER EXAMINATIONS IN PRINCETON ONLY

Examination Fee

Each candidate who proposes to take the Princeton entrance examinations in September should send to the Registrar before September 1:

(a) A statement containing his full name and the name and address of his parent or guardian, and of his school. If he has taken preliminary examinations, this should be stated.

(b) A fee of five dollars, either by money order or cheque payable to *Princeton University*. In return he will receive a receipt from the Registrar which he must show to the examiner when he registers at the examination.

Candidates who have not sent this statement and fee may be admitted to the examinations; in such cases the reports of the results of the examinations may be delayed, and in no case will a report be sent until the fee is received.

Candidates taking examinations in different years shall pay the fee each year.

In September Princeton University will use Comprehensive Examination Papers prepared by the College Entrance Examination Board for candidates under the *Old* as well as under the *New Plan* of admission.

NOTE.—By a *Comprehensive Examination Paper* is meant:

1. One that is adapted to such variety of school instruction as exists in the several subjects—that is, these question papers will not prescribe methods but will recognize the general principle that the schools determine how they shall teach a subject and that the college tests results or power.

2. One that is adapted to the different stages of training in the subjects in which they are set—that is, these papers will give boys opportunities to show their power, whether they have had the minimum or the maximum amount of training given in school. For example, the papers in Latin will be so drawn up as to enable a boy who has had only two years of Latin to show that he has as much command over the language as can be expected from that amount of training, and they will be similarly useful for the boy who has had three or four years of Latin.

In September 1918 the order of examinations will be as follows:

Monday, September 16

8.30 A. M.- 9.00 A. M. Registration of all candidates.
9.00 A. M.-12.00 M. English
2.00 P. M.- 5.00 P. M. Physics
Chemistry

Tuesday, September 17

9.00 A. M.-12.00 M. Latin
2.00 P. M.- 5.00 P. M. French
Spanish

Wednesday, September 18

9.00 A. M.-12.00 M. Elementary Mathematics
2.00 P. M.- 5.00 P. M. German

Thursday, September 19

9.00 A. M.-12.00 M. History
2.00 P. M.- 5.00 P. M. Greek.
Advanced Mathematics

Friday, September 20

AURAL TESTS IN FRENCH, GERMAN AND SPANISH

NOTE.—All candidates offering French, German or Spanish for admission are required, in addition to the written examination taken either in June or September, to take these aural tests. For the sake of convenience candidates will be divided into alphabetical groups and will meet in the rooms of McCosh Hall as follows:

9.00 A. M.- 9.45 A. M.....French A Elementary

A	through	D	.....	McCosh	60
E	"	K	.....	"	62
L	"	R	.....	"	64
S	"	Z	.....	"	66

10.00 A. M.-10.45 A. M. ..... French B Intermediate

A	through	D	..... McCosh	60
E	"	K	..... "	62
L	"	R	..... "	64
S	"	Z	..... "	66

11.00 A. M.-11.45 A. M. ..... German A Elementary

A	through	D	..... McCosh	60
E	"	K	..... "	62
L	"	R	..... "	64
S	"	Z	..... "	66

12.00 M.-12.45 P. M. ..... German B Intermediate

A	through	D	..... McCosh	60
E	"	K	..... "	62
L	"	R	..... "	64
S	"	Z	..... "	66

2.00 P. M.- 2.45 P. M. ..... Spanish A Elementary

A	through	Z	..... McCosh	60

All candidates are expected to appear promptly at the time set for an examination. No candidate will be allowed to enter an examination later than a quarter of an hour after the scheduled time; and no candidate who has seen a question paper will be allowed to leave the examination until half an hour shall have elapsed.

Applicants who have any conditions or other deficiencies from the June examinations are required to remove them at the September entrance examinations.

Examinations at other than the specified times are granted only in very exceptional circumstances. An applicant for examination at a special time must present a satisfactory reason and obtain permission by writing to the Registrar and must pay into the treasury a fee of $10 for every subject, or part thereof, in which an examination is set. No special examinations are held outside of Princeton.

Testimonials as to Character

All candidates for admission to any class, or as special students, must bring with them satisfactory testimonials of good moral character, preferably from their last instructor; and if the candidate has been a member of another college, university, or similar institution, he must produce a letter of honorable dismissal from the President or Faculty of his former institution.

No candidate is admitted into the undergraduate department in regular class standing without examination and a vote of the Faculty.

PLANS OF ADMISSION

For admission to the freshman class a candidate must satisfy the requirements of one of the two plans described below:

I. OLD PLAN OF ADMISSION OPEN TO ALL CANDIDATES

(1) A candidate must pass satisfactorily written examinations in all of the subjects required for admission,* as enumerated on pages 79 to 82 of this catalogue. He may, however, be admitted conditionally on the recommendation of the Committee on Entrance.

(2) The final recommendation from the school, designating the individual subjects that the candidate is to offer with the school's approval, must be forwarded to the Registrar of Princeton University at least one week before the first day of the examinations.

[*Preliminary Examination*]

(3) At the examinations in June and September, candidates for admission to the freshman class at some later time are admitted to examination in a portion of the sub-

* Sixty per cent is the passing mark.

jects required for entrance. Each candidate for preliminary examination must present a certificate, signed by his teacher, stating that he is prepared in each of the subjects which he may offer. *No credit will be given for a preliminary examination in any subject in which the candidate is not so certified.*

II. NEW PLAN OF ADMISSION

In addition to the Old Plan of entrance to the freshman class, in courses leading to the bachelor's degrees as well as in the course leading to the degree of Civil Engineer, the following plan is open to candidates who have previously obtained permission from the Committee on Entrance.

A candidate for admission under this plan may send to the Registrar of Princeton University before May 1 or September 1 a detailed statement, signed by the principal of his school, which shall show the course of study which he has pursued during the past four years and the degree of proficiency which he has attained in each subject. This statement may be submitted on a blank sent upon request by the Registrar, or in some form convenient to the school.

If the Committee on Entrance is satisfied from this statement that the candidate has completed a course of study fitting him for admission to Princeton University, and has attained a satisfactory degree of proficiency in his studies, the Committee may give him permission to apply for entrance under this plan.

Permission to try these examinations must be obtained from the Princeton Committee on Entrance. An accepted candidate, if he makes previous application to the College Entrance Examination Board, may present himself for examination in June at any of the examination centers of the Board, where he will take *comprehensive examinations* in the four subjects designated by the Committee. (See p. 65-66.) In September the examinations will be held in

Princeton only. These examinations will be based upon the candidate's work in the four principal subjects which form the prescribed subjects of the Old Plan, as follows:

A.B.	B.S.-Litt.B.	C.E.
English Cp.	English Cp.	English Cp.
Mathematics, Advanced Cp. 4 or Elementary Cp. 3	Mathematics, Advanced Cp. 4 or Elementary Cp. 3	Mathematics, Advanced Cp. 4
Latin Cp. 4	Latin Cp. 4	French Cp. 2 or German Cp. 2 or Latin Cp. 2
Greek Cp. 3	French Cp. 2 or Cp. 3 or German Cp. 2 or Cp. 3	Physics Cp. or Chemistry Cp. or History Cp.

These examinations will be comprehensive in character, but particular emphasis will be laid upon the later or more advanced portions of the work. A candidate who passes creditably in these four subjects will be admitted to the freshman class without conditions.

Statement of School Record

The statement of the candidate's school record should contain the following information:

(a) The textbooks used in each year of his work in each subject.

(b) The number of weeks devoted each year to each subject.

(c) The number of hours per week devoted each year to each subject.

(d) The grade attained each year in each subject, together with an explanation of the system of marking.

The Examinations

The comprehensive examinations must be taken by candidates for admission under the New Plan but may be taken by Old Plan candidates in place of the ordinary or Old Plan examinations.

The order of the examinations will be in accordance with the schedule printed above.

Mathematics.

The examination will be adapted to the proficiency of those who have had not less than the usual school course, in Algebra AI and AII, and in Plane Geometry (Elementary Mathematics); and it will also provide the means by which those who have extended their study of Mathematics to include Solid Geometry, or Logarithms and Trigonometry may exhibit their proficiency in any or all of these branches of Mathematics (Advanced Mathematics). There will be two papers, one for those who have had no instruction beyond Elementary Mathematics, and one for those whose instruction has extended beyond. Any one whose instruction has extended beyond Elementary Mathematics will be expected to take the paper containing questions on Advanced Mathematics, and to devote at least half his time to those questions which cover the Advanced Mathematics he has studied. Candidates will find printed upon the examination paper the instructions necessary for their guidance.

English

The examination in English will test the candidate's preparation in the fields covered by the Old Method examinations in 1. Grammar and Composition and 2. Literature. It will test his ability to write clearly and correctly, and to show that he has read, understood, and appreciated a sufficient amount of English literature. The paper will contain some questions that cannot be answered except by candidates who are able to apply what they have learned to the solution of unexpected problems. In so far as ability to pass the examination may depend upon a knowledge of the subject-matter of books, it will not necessarily depend upon the knowledge of those books prescribed under the Old

Plan, though no candidate who has been intelligently prepared to attempt the examination under the Old Plan should find himself at any disadvantage if he decides to avail himself of the Comprehensive Examination.

Latin

The examination will be adapted to the proficiency of those who have studied Latin in a systematic school course of five lessons each week, extending through two, three or four years.

The paper will include passages of Latin prose and verse of varying degrees of difficulty to be translated at sight, and passages for Latin composition of varying degrees of difficulty. Accompanying the different passages set upon the paper, will be questions on forms, syntax, prosody, and the idioms of the language, as well as questions on the subject matter, literary and historical, connected with the authors usually read in schools.

Each candidate will choose those parts of the paper which are designed to test such proficiency in the language as may properly be acquired in two or more years' study; but a candidate who has studied Latin four years may not select the more elementary parts of the paper.

French

The examination will be adapted to the proficiency of those who have studied French in school for two or three years, respectively.

The paper will include passages of French prose or verse of varying degrees of difficulty to be translated into good English. It will also contain passages in English of varying degrees of difficulty to be translated into French, and questions on grammar. Opportunity will also be given for those who have had special training in French to show their ability to express themselves in that language.

Beginning in 1918, this written examination will be sup-

plemented by the aural tests (x) and (y) to be given only in Princeton in September (See page 70).

German

The examination will be adapted to the proficiency of those who have studied German in school for two or three years, respectively.

The paper will include passages of German prose or verse of varying degrees of difficulty to be translated into good English. It will also contain passages in English of varying degrees of difficulty to be translated into German, and questions on grammar. Opportunity will also be given for those who have had special training in German to show their ability to express themselves in that language.

Beginning in 1918, this written examination will be supplemented by the aural tests (x) and (y) to be given only in Princeton in September (See page 70).

Physics

The examination will be adapted to the proficiency of those who have had such a course of school training in the elementary facts and principles of Physics as is described in the definition of Elementary Physics issued by the College Entrance Examination Board. The paper will contain, however, more questions than any one candidate is expected to answer, in which an effort will be made to make due allowance for diversity of instruction.

Chemistry

The examination will be adapted to the proficiency of those who have received systematic instruction in the principles of Chemistry and their applications in a school course in which laboratory experiments are performed by the pupil. The paper will contain more questions than the candidate is expected to answer, in order to make allowance for di-

versity of instruction in different schools, and will require the recognition of the phenomena and the laws that are of general significance and the illustration of such phenomena and laws by well-chosen examples. The questions will include not only questions on the chemistry of laboratory practice but also, in an elementary fashion, the chemistry of the household and of industry.

History

The paper will consist of five divisions, made up of questions on Ancient History, Mediaeval and Modern History, English History, American History, and Modern European History. If the candidate has studied but one of these divisions, he will be expected to answer the prescribed questions on that division, one of them being a map question. He will be expected to spend about two hours on these questions. In the remaining hour, he should answer additional questions from the same division. If, on the other hand, the candidate has studied two or more of these divisions, he will be expected to answer, in addition to the prescribed questions on one of these divisions, questions on such other divisions as he may have studied.

In reading the papers, account will be taken of the year of the school programme in which the subject has been studied. As further evidence of a candidate's efficiency, note-books may be submitted.

Greek

The examination will be adapted to the proficiency of those who have studied Greek in a systematic school course of five exercises a week, extending through two or three school years.

The paper will include passages of simple Attic prose, and of Homer, to be translated at sight, and a passage from the first eight chapters of Xenophon's Anabasis, upon

which questions will be based to afford the candidate means of showing his mastery of the ordinary forms, constructions, and idioms of the language. The paper will also include passages in English to be turned into Greek, and questions on prosody and on the Homeric poems and on Homeric life.

FRESHMAN ENTRANCE REQUIREMENTS

The following entrance requirements are defined for the most part in close accordance with recommendations of the National Education Association and of the College Entrance Examination Board. It is recommended that candidates be prepared for examination on the requirements as specified, but equivalents will be accepted. The University will in all cases be the judge of the equivalence of subjects offered as substitutes for the specified requirements.

There are three regular forms of entrance to the courses leading to degrees in Princeton University, viz.: (1) Entrance for those who offer Greek and are candidates for the degree of A.B. (2) Entrance for those who do not offer Greek and are candidates for the degree of B.S. or Litt.B., for which the entrance requirements are identical. (3) Entrance for those who are candidates for the degree of C.E.

The degree of Bachelor of Science is open to those who concentrate in one of the mathematical or scientific departments during the junior and senior years; the degree of Bachelor of Letters to those who concentrate in one of the departments of philosophical, political, literary, or other humanistic studies.

FRESHMAN ENTRANCE REQUIREMENTS FOR THE COURSES LEADING TO THE DEGREES OF A.B., B.S., AND LITT.B.

1. The requirements for admission to the course leading to the degree of Bachelor of Arts are as follows:

GREEK, 3 UNITS:
Greek A1, A2, BG, C, or Greek comprehensive three years, CP. 3
LATIN, 4 UNITS:
Latin 2, 3, 4, 5, or Latin 3, 124, 5, or Latin comprehensive four years, CP. 4
ENGLISH, 3 UNITS:
English 1, 2, or English comprehensive
MATHEMATICS, 2½ UNITS:
Algebra A, including A1 and A2, C, or Elementary Mathematics, comprehensive three years, CP. 3

In addition to these required subjects, *elective subjects to the value of at least 2½ units* must be offered from the list printed below.

2. The requirements for admission to the courses leading to the degrees of Bachelor of Letters or Bachelor of Science are as follows:

AN ELEMENTARY MODERN LANGUAGE, 2 UNITS:
French A, or French comprehensive two years, CP. 2
German A, or German comprehensive two years, CP. 2
Spanish A, or Spanish comprehensive two years, CP. 2
LATIN, 4 UNITS:
Latin 2, 3, 4, 5, or Latin 3, 124, 5, or Latin comprehensive four years, CP. 4
ENGLISH, 3 UNITS:
English 1, 2, or English comprehensive
MATHEMATICS, 2½ UNITS:
Algebra A, including A1 and A2, C, or Elementary Mathematics, comprehensive three years, CP. 3

In addition to these required subjects, *elective subjects to the value of at least 3½ units* must be offered from the list printed below.

3. The requirements for admission to the course leading to the degree of Civil Engineer are as follows:

TWO ELEMENTARY FOREIGN LANGUAGES, 4 UNITS:
Latin 3, or Latin comprehensive two years, CP. 2
French A, or French comprehensive two years, CP. 2
German A, or German comprehensive two years, CP. 2
Spanish A, or Spanish comprehensive two years, CP. 2
ENGLISH, 3 UNITS:
English 1, 2, or English comprehensive

MATHEMATICS, 3½ UNITS:

Mathematics A, including A1, and A2, C, D, F, or Advanced Mathematics comprehensive four years, CP. 4

SCIENCE, 1 UNIT:

Physics or Chemistry.

In addition to these required subjects, *elective subjects to the value of at least 3 units* must be offered from the list printed below.

LIST OF REQUIRED AND ELECTIVE SUBJECTS

ORDINARY EXAMINATIONS	COMPREHENSIVE EXAMINATIONS
GREEK	GREEK
A1. Greek Grammar	
A2. Elementary Prose Composition	
BG. Xenophon and Sight Translation of Prose.	CP. 2. Two-year Greek
C. Homer, Iliad Bks. I-III.	CP. 3. Three-year Greek
LATIN	LATIN
3. Second Year Latin	CP. 2. Two-year Latin.
2 and 4. Elementary Prose Composition and Cicero and Sight Translation of Prose, or	
124. Latin Grammar, Composition and Cicero.	CP. 3. Three-year Latin
5. Vergil and Sight Translation of Poetry.	CP. 4. Four-year Latin
ENGLISH	ENGLISH
1. Grammar and Composition	
2. Literature	CP. English
MATHEMATICS	MATHEMATICS
A1. Algebra to Quadratics	
A2. Algebra, Quadratics and beyond.	
C. Plane Geometry	CP. 3. Elementary Mathematics
D. Solid Geometry	CP. 4. Elementary and Advanced Mathematics*
F. Plane Trigonometry	

* This examination is so arranged that the candidate may offer in addition to Elementary Algebra and Plane Geometry either one or both of Solid Geometry and Plane Trigonometry.

FRENCH	FRENCH
A. Elementary	Cp. 2. Two-year French
B. Intermediate	Cp. 3. Three-year French
GERMAN	GERMAN
A. Elementary	Cp. 2. Two-year German
B. Intermediate	Cp. 3. Three-year German
SPANISH	SPANISH
A. Elementary	Cp. 2. Two-year Spanish
	Cp. 3. Three-year Spanish
HISTORY: (Not more than two of)	HISTORY: (Not more than two of)
A. Ancient	Ancient
B. Mediaeval and Modern	Mediaeval and Modern
C. English	English
D. American	American
E. Modern European*	Modern European*
SCIENCE	SCIENCE
Physics	Physics
Chemistry	Chemistry

FRESHMAN ENTRANCE SUBJECTS

The requirements in History are based on the recommendations of the Committee of Seven of the American Historical Association.

HISTORY

A. *Ancient History,* with special reference to Greek and Roman history, and including also a short introductory study of the more ancient nations and the chief events of the early Middle Ages, down to the death of Charlemagne (814).

B. *Mediaeval and Modern European History,* from the death of Charlemagne to the present time.

C. *English History.*

D. *American History and Civil Government.*

E. *Modern European History,* from 1661 to the present time including English History since 1760.

* No credit f r Modern European History will be granted to candidates who are credited with either Mediaeval and Modern European History or English History.

Table of Values in Units

	Requirements for admission to the course leading to the degree of Bachelor of Arts	Units	Requirements for admission to the course leading to the degrees of Bachelor of Letters or Science	Units	Requirements for admission to the course leading to the degree of Civil Engineer	Units
	Greek A1, A2, BG, C, or *Greek Cp. 3*	3	An Elementary Modern Language. (French A, German A, Spanish A), or *French Cp. 2, German Cp. 2, Spanish Cp. 2*	2	Two Elementary Foreign Languages Latin 3, or *Latin Cp. 2* French A, or *French Cp. 2* German A, or *German Cp. 2* Spanish A, or *Spanish Cp. 2*	4
REQUIRED	Latin 2, 3, 4, 5, or 124, 3, 5, or *Latin Cp. 4,*	4	Latin 2, 3, 4, 5, or 124, 3, 5, or *Latin Cp. 4*	4		
SUBJECTS	English 1, 2, or *English Cp.*	3	English 1, 2, or *English Cp.*	3	Mathematics A1, A2, C, D, F, or *Advanced Mathematics, Cp. 4*	3½
	Mathematics A1, A2, C, or *Elementary Mathematics Cp. 3*	2½	Mathematics A1, A2, C, or *Elementary Mathematics Cp. 3*	2½	Physics or Chemistry	1
					English 1, 2, or *English Cp.*	3
ELECTIVE	History A, or *Ancient Cp.*	1	History A, or *Ancient Cp.*	1	History A, or *Ancient Cp.*	1
SUBJECTS	History B, or *Med. and Mod. Cp.*	1	History B, or *Med. and Mod. Cp.*	1	History B, or *Med. and Cp.*	1
	History C, or *English Cp.*	1	History C, or *English Cp.*	1	History C, or *English Cp.*	1
	History D, or *American Cp.*	1	History D, or *American Cp.*	1	History D, or *American Cp.*	
	History E, or *Mod. English Cp.*	1	History E, or *Mod. English Cp.*	1	History E, or *Mod. English Cp.*	1
At least 2½ units for A.B.	French A, or *French Cp. 2*	2	French A, or *French Cp. 2*	2	French A, or *French Cp. 2*	2
	French B, or *French Cp. 3*	1	French B, or *French Cp. 3*	1	French B, or *French Cp. 3*	1
	German A, or *German Cp. 2*	2	German A, or *German Cp. 2*	2	German A, or *German Cp. 2*	1
At least 3½ units for Litt.B.-B.S.	German B, or *German Cp. 3*	1	German B, or *German Cp. 3*	1	German B, or *German Cp. 3*	2
	Spanish A, or *Spanish Cp. 2*	2	Spanish A, or *Spanish Cp. 2*	2	Spanish A, or *Spanish Cp. 2*	1
	Spanish Cp. 3	1	*Spanish Cp. 3*	1	*Spanish Cp. 3*	2
	Mathematics D, or *Mathematics Cp. 4*	½	Mathematics D, or *Mathematics Cp. 4*	½	Latin 3, or *Latin Cp. 2*	1
At least 3 units for C.E.	Mathematics F, or *Mathematics Cp. 4*	½	Mathematics F, or *Mathematics Cp. 4*	½	Latin 2 and 4, or Latin 124, or	3
	Physics	1	Physics	1	*Latin Cp. 3*	1
	Chemistry	1	Chemistry	1	Latin 5, or *Latin Cp. 4*	4

NOTE: Modern European History may not be offered by candidates taking Mediaeval and Modern European History or English History.

The examinations in history will be framed so as to require the use of both judgment and memory on the pupil's part. They will presuppose the use of good textbooks, collateral reading, and practice in written work. Geographical knowledge will be tested by means of an outline map.

The Report of the Committee of Seven, which appeared in the Proceedings of the American Historical Association for 1898, was published separately by the Macmillan Company in 1899, under the title *Study of History in Schools.* It was incorporated in the Report made to the National Education Association in 1899 by the Committee on College Entrance Requirements.

The attention of teachers is called also to the report of the Committee of Five of the American Historical Society, *The Study of History in Secondary Schools* (New York, The Macmillan Company, 1911). The examiners of the Board will endeavor to frame the examination papers *on the five fields of work defined above* in accordance with the recommendations of this committee.

GREEK

The following requirements in Greek conform as closely as possible to the recommendations of the Committee of Twelve of the American Philological Association.

A1. Grammar: The inflections; the simpler rules for composition and derivation of words; syntax of cases and the verbs; structure of sentences in general, with particular regard to relative and conditional sentences, indirect discourse, and the subjunctive.†

A2. Elementary Prose Composition, consisting prin-

cipally of detached sentences to test the candidate's knowledge of grammatical constructions.†

The examinations in grammar and prose composition will be based on the first two books of Xenophon's *Anabasis*.

BG. Xenophon and Sight Translation of Prose: The first four books of the *Anabasis*.

C. Homer: Iliad, I-III: The first three books of the *Iliad* (omitting II, 494-end), and the Homeric constructions, form, and prosody.

LATIN

The following requirements in Latin are in accordance with the recommendations made to the American Philological Association by the Commission on College Entrance Requirements in Latin, October, 1909.*

I. *Amount and Range of the Reading Required*

(1) The Latin reading, without regard to the prescription of particular authors and works, shall be not less *in amount* than Caesar: *Gallic War,* I-IV; Cicero: the Orations against Catiline, for the Manilian law, and for Archias; Vergil: *Æneid,* I-VI.

(2) The amount of reading specifed above shall be selected by the schools from the following authors and works: Cæsar (*Gallic War* and *Civil War*) and Nepos (*Lives*); Cicero (Orations, Letters, and *De Senectute*) and Sallust (*Catáline* and *Jugurthine War*); Vergil (*Bucolics, Georgics,* and *Æneid*) and Ovid (*Metamorphoses, Fasti,* and *Tristia*).

II. *Scope of the Examinations*

(1) *Translation at Sight.* Candidates will be examined in translation at sight of both prose and verse. The vocabulary, constructions, and range of ideas of the passages set

† Greek A1 and A2 should be taken together as constituting a single indivisible subject.

* This Commission and its work are described in the Tenth Annual Report of the Secretary of the College Entrance Examination Board, pages 4-7.

will be suited to the preparation secured by the reading indicated above.

(2) *Prescribed Reading.* Candidates will be examined also upon the following prescribed reading: Cicero: Orations for the Manilian Law and for Archias; and Vergil: *Æneid,* I, II and either IV or VI, at the option of the candidate; with questions on subject-matter, literary and historical allusions, and prosody. Every paper in which passages from the prescribed reading are set for translation will contain also one or more passages for translation at sight; and candidates must deal satisfactorily with both these parts of the paper, or they will not be given credit for either part.

(3) *Grammar and Composition.* The examinations in grammar and composition will demand thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school, with ability to use this knowledge in writing simple Latin prose.

Suggestions Concerning Preparation

Exercises in translation at sight should begin in school with the first lessons in which Latin sentences of any length occur, and should continue throughout the course with sufficient frequency to insure correct methods of work on the part of the student. From the outset particular attention should be given to developing the ability to take in the meaning of each word—and so, gradually, of the whole sentence—just as it stands; the sentence should be read and understood in the order of the original, with full appreciation of each word as it comes, so far as this can be known or inferred from that which has preceded, and from the form and the position of the word itself. The habit of reading in this way should be encouraged and cultivated as the best preparation for all the translating that the student has to do. No translation, however, should be a mechani-

cal metaphrase. Nor should it be a mere loose paraphrase. The full meaning of the passage to be translated, gathered in the way described above, should finally be expressed in clear and natural English.

A written examination cannot test the ear or tongue, but proper instruction in any language will necessarily include the training of both. The school work in Latin, therefore, should include much reading aloud, writing from dictation, and translation from the teacher's reading. Learning suitable passages by heart is also very useful, and should be more practised.

The work in composition should give the student a better understanding of the Latin he is reading at the time, if it is prose, and greater facility in reading. It is desirable, however, that there should be systematic and regular work in composition during the time in which poetry is read as well; for this work the prose authors already studied should be used as models.

Subjects for Examination

2. *Elementary Prose Composition.* The examination will presuppose the reading of the required amount of prose (See I, 1 and 2), including the prose works prescribed (See II, 2).*

3. *Second Year Latin.* This examination covers two years' work in Latin and will presuppose reading not less in amount than Cæsar: *Gallic War,* I-IV, selected by the schools from Cæsar (*Gallic War* and *Civil War*) and Nepos (*Lives*); but the passages set will be chosen with a view to sight translation. The paper will include easy grammatical questions and some simple composition.

4. *Cicero* (Orations for the Manilian Law and for Archias) and *Sight Translation of Prose.* The examination

* Latin 2 and 4 should be taken together as constituting a single indivisible

will presuppose the reading of the required amount of prose (See I, 1 and 2).*

5. *Vergil* (*Æneid*, I, II, and either IV or VI, at the option of the candidate) and *Sight Translation of Poetry*. The examination will presuppose the reading of the required amount of poetry (See I, 1 and 2).

ENGLISH

The requirement in English is that recommended by the National Conference on Uniform Entrance Requirements in English.

REQUIREMENT FOR 1915-1919

The study of English in school has two main objects: (1) command of correct and clear English, spoken and written; (2) ability to read with accuracy, intelligence, and appreciation.

Grammar and Composition

The first object requires instruction in grammar and composition. English grammar should ordinarily be reviewed in the secondary school; and correct spelling and grammatical accuracy should be rigorously exacted in connection with all written work during the four years. The principles of English composition governing punctuation, the use of words, sentences, and paragraphs should be thoroughly mastered; and practice in composition, oral as well as written, should extend throughout the secondary school period. Written exercises may well comprise letter-writing, narration, description, and easy exposition and argument. It is advisable that subjects for this work be taken from the student's personal experience, general

subject. A combined paper including Latin 1 (Grammar), 2 (Composition), and 4 (Cicero and Sight Translation of Prose) will be offered for such candidates as may wish to take all three subjects at one examination. Three hours will be given to this combined paper.

knowledge, and studies other than English, as well as from his reading in literature. Finally, special instruction in language and composition should be accompanied by concerted effort of teachers in all branches to cultivate in the student the habit of using good English in his recitations and various exercises, whether oral or written.

Literature

The second object is sought by means of two lists of books, headed respectively READING and STUDY, from which may be framed a progressive course in literature covering four years. In connection with both lists, the student should be trained in reading aloud and be encouraged to commit to memory some of the more notable passages both in verse and in prose. As an aid to literary appreciation, he is further advised to acquaint himself with the most important facts in the lives of the authors whose works he reads and with their place in literary history.

A. Reading

The aim of this course is to foster in the student the habit of intelligent reading and to develop a taste for good literature, by giving him a first-hand knowledge of some of its best specimens. He should read the books carefully, but his attention should not be so fixed upon details that he fails to appreciate the main purpose and charm of what he reads.

With a view to large freedom of choice, the books provided for reading are arranged in the following groups, from each of which at least two selections are to be made, except as otherwise provided under Group I.

---

* Latin 2 and 4 should be taken together as constituting a single indivisible subject.

GROUP I—CLASSICS IN TRANSLATION

The *Old Testament,* comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther.

The *Odyssey,* with the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII.

The *Iliad,* with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI.

The *Æneid.*

The *Odyssey, Iliad,* and *Æneid* should be read in English translations of recognized literary excellence.

For any selection from this group a selection from any other group may be substituted.

GROUP II—SHAKESPEARE

Midsummer Night's Dream; Merchant of Venice; As You Like It; Twelfth Night; The Tempest; Romeo and Juliet; King John; Richard II; Richard III; Henry V; Coriolanus, [*Julius Caesar; Macbeth; Hamlet,* if not chosen for study under B.]

GROUP III—PROSE FICTION

Malory: *Morte d'Arthur* (about 100 pages); Bunyan: *Pilgrim's Progress,* Part I; Swift: *Gulliver's Travels* (voyages to Lilliput and to Brobdingnag); Defoe: *Robinson Crusoe,* Part I; Goldsmith: *Vicar of Wakefield;* Frances Burney: *Evelina;* Scott's Novels, any *one;* Jane Austen's Novels, any *one;* Maria Edgeworth: *Castle Rackrent,* or *The Absentee;* Dickens' Novels, any *one;* Thackeray's Novels, any *one;* George Eliot's Novel's, any *one;* Mrs. Gaskell: *Cranford;* Kingsley: *Westward Ho!* or *Hereward the Wake;* Reade: *The Cloister and the Hearth;* Blackmore: *Lorna Doone;* Hughes: *Tom Brown's Schooldays;*

Stevenson: *Treasure Island,* or *Kidnapped,* or *Master of Ballantrae;* Cooper's Novels, any *one;* Poe: Selected Tales; Hawthorne: *The House of the Seven Gables,* or *Twice Told Tales,* or *Mosses from an Old Manse;* A collection of *Short Stories* by various standard writers.

GROUP IV—ESSAYS, BIOGRAPHY, ETC.

Addison and Steele: *The Sir Roger de Coverley Papers,* or Selections from the *Tatler* and *Spectator* (about 200 pages); Boswell: Selections from the *Life of Johnson* (about 200 pages); Franklin: *Autobiography;* Irving: Selections from the *Sketch Book* (about 200 pages), or *Life of Goldsmith;* Southey: *Life of Nelson;* Lamb: Selections from the *Essays of Elia* (about 100 pages); Lockhart: Selections from the *Life of Scott* (about 200 pages); Thackeray: Lectures on *Swift, Addison,* and *Steele* in the *English Humorists;* Macaulay: any one of the following essays: *Lord Clive, Warren Hastings, Milton, Addison, Goldsmith, Frederic the Great, Madame d'Arblay;* Trevelyan: Selections from the *Life of Macaulay* (about 200 pages); Ruskin: *Sesame and Lilies,* or *Selections* (about 150 pages); Dana: *Two Years before the Mast;* Lincoln: Selections, including at least the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address, the Letter to Horace Greeley, together with a brief memoir or estimate of Lincoln; Parkman: *The Oregon Trail;* Thoreau: *Walden;* Lowell: *Selected Essays* (about 150 pages); Holmes: *The Autocrat of the Breakfast Table;* Stevenson: *An Inland Voyage* and *Travels with a Donkey;* Huxley: *Autobiography* and selections from *Lay Sermons,* including the addresses on *Improving Natural Knowledge, A Liberal Education,* and *A Piece of Chalk;* A collection of *Essays* by Bacon, Lamb, DeQuincey, Hazlitt, Emerson, and later writers; A collection of *Letters* by various standard writers.

GROUP V—POETRY

Palgrave: *Golden Treasury* (First Series), Books II and III, with special attention to Dryden, Collins, Gray, Cowper, and Burns; Palgrave: *Golden Treasury* (First Series), Book IV, with special attention to Wordsworth, Keats, and Shelley (if not chosen for study under B); Goldsmith: *The Traveller* and *The Deserted Village;* Pope: *The Rape of the Lock;* A collection of English and Scottish *Ballads,* as, for example, some *Robin Hood* ballads. *The Battle of Otterburn, King Estmere, Young Beichan, Bewick and Grahame, Sir Patrick Spens,* and a selection from later ballads; Coleridge: *The Ancient Mariner, Christabel,* and *Kubla Kahn;* Byron: *Childe Harold,* Canto III or IV, and *The Prisoner of Chillon;* Scott: *The Lady of the Lake,* or *Marmion;* Macaulay: *The Lays of Ancient Rome, The Battle of Naseby, The Armada, Ivry;* Tennyson: *The Princess,* or *Gareth and Lynette, Lancelot and Elaine,* and *The Passing of Arthur;* Browning: *Cavalier Tunes, The Lost Leader, How They Brought the Good News from Ghent to Aix, Home Thoughts from Abroad, Home Thoughts from the Sea, Incident of the French Camp, Hervé Riel, Pheidippides, My Last Duchess, Up at a Villa—Down in the City, The Italian in England, Patriot, The Pied Piper, "De Gustibus"—, Instans Tyrannus;* Arnold, *Sohrab and Rustum,* and *The Forsaken Merman;* Selections from American Poetry, with special attention to Poe, Lowell, Longfellow, and Whittier.

B. Study

This part of the requirement is intended as a natural and logical continuation of the student's earlier reading, with greater stress laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions. The books provided for study are arranged in four groups, from each of which one selection is to be made.

GROUP I—DRAMA

Shakespeare: *Julius Caesar,* or *Macbeth,* or *Hamlet.*

GROUP II—POETRY

Milton: *L'Allegro, Il Penseroso,* and either *Comus* or *Lycidas;* Tennyson: *The Coming of Arthur, The Holy Grail,* and *The Passing of Arthur;* The selections from Wordsworth, Keats, and Shelley in Book IV of Palgrave's *Golden Treasury* (First Series).

GROUP III—ORATORY

Burke: *Speech on Conciliation with America;* Macaulay's two *Speeches on Copyright* and Lincoln's *Speech at Cooper Union;* Washington's *Farewell Address* and Webster's *First Bunker Hill Oration.*

GROUP IV—ESSAYS

Carlyle: *Essay on Burns,* with a selection from Burns's *Poems;* Macaulay: *Life of Johnson;* Emerson: *Essay on Manners.*

Examination

However accurate in subject-matter, no paper will be considered satisfactory if seriously defective in punctuation, spelling, or other essentials of good usage.

The examination will be divided into two parts:

I. GRAMMAR AND COMPOSITION

In grammar and composition, the candidate may be asked specific questions upon the practical essentials of these studies, such as the relation of the various parts of a sentence to one another, the construction of individual words in a sentence of reasonable difficulty, and those good usages

of modern English which one should know in distinction from current errors. The main test in composition will consist of one or more essays, developing a theme through several paragraphs; the subjects will be drawn from the books read, from the candidate's other studies, and from his personal knowledge and experience quite apart from reading. For this purpose the examiner will provide several subjects, perhaps eight or ten, from which the candidate may make his own selections. He will not be expected to write more than four hundred words an hour.

2. LITERATURE

The examination in literature will include:

A. General questions designed to test such a knowledge and appreciation of literature as may be gained by fulfilling the requirements defined above under *A. READING.* The candidate will be required to submit a list of the books read in preparation for the examination, certified by the principal of the school in which he was prepared; but the books named in this list will not be made the basis of detailed questions*.

B. A test on the books prescribed under *B. STUDY* above, which will consist of questions upon their content, form, and structure, and upon the meaning of such words, phrases, and allusions as may be necessary to an understanding of the works and an appreciation of their salient qualities of style. General questions may also be asked concerning the lives of the authors, their other works, and the periods of literary history to which they belong.

MODERN LANGUAGES

NOTE—*In 1918 and thereafter, the Princeton entrance requirements in the modern languages will include, in addition to the June and September written examinations, aural*

tests in German, French, and Spanish to be given only in Princeton in September.

1. An aural test in Elementary German, French, and Spanish to be designated German (x), French (x), and Spanish (x).

2. An aural test in Intermediate German, French, and Spanish to be designated German (y), French (y), and Spanish (y).

All candidates offering German, French or Spanish for admission will be required to take these tests. Announcement in regard to their time and place will be found in the Examination Schedule for September, 1918. (See page 70.)

In rating Elementary and Intermediate German, French or Spanish, a candidate's grade on these aural tests will be reckoned as an integral part of his final grade in the subject.

Candidates who pass the written part of the examination but fail to pass the aural part will not be re-examined in the former. Candidates who fail in the written part of the examination, but pass only the aural part, must be re-examined in both parts.

DESCRIPTION OF AURAL TESTS

These aural tests are to be considered supplementary to the present entrance examinations in the modern languages. They do not comtemplate an increase either in the length of time or the amount of work devoted in school to preparation for the present entrance requirements in German, French, and Spanish but are introduced with the view of encouraging the secondary schools to lay greater emphasis on pronunciation and ultimately of requiring an oral test in the modern languages for admission.

1. The aural test (x) in the Elementary requirement will

* A suitable blank form of certificate may be obtained from the Secretary of the College Entrance Examination Board upon application.

be not more than forty-five minutes in length and will consist of three parts: (1) an exercise in writing easy German, French, or Spanish prose from dictation; (2) the reproduction in English of the content of a short "sight" passage in easy German, French or Spanish prose, read aloud by the examiner; (3) writing in German, French, or Spanish answers to questions put by the examiner in that language on a short connected passage, read aloud by the examiner just before the questions are asked.

2. The aural test (y) in the Intermediate requirement will likewise be not more than forty-five minutes in length and will consist of three parts: (1) an exercise in writing moderately difficult German, French, or Spanish from dictation; (2) the written reproduction in German, French, or Spanish of the content of a short "sight" passage of ordinary narrative German, French, or Spanish read aloud by the examiner; (3) writing in the respective language answers to questions put by the examiner in German, French or Spanish on a connected prose passage, read aloud by the examiner just before the questions are asked.

GERMAN

The requirements in German follow the recommendations of the Committee of Twelve of the Modern Language Association of America.*

A. Elementary German

THE AIM OF THE INSTRUCTION

At the end of the elementary course in German the pupil should be able to read at sight, and to translate, if called upon, by way of proving ability to read, a passage of very

* The report of the Committee of Twelve, which was submitted in December, 1898, may be obtained in separate book-form from D. C. Heath & Co. The lists of texts at present given in the requirements of the College Entrance Examination Board were recommended by a committee of the Modern Language Association in December, 1910.

easy dialogue or narrative prose, help being given upon unusual words and construction, to put into German short English sentences taken from the language of every-day life or based upon the text given for translation, and to answer questions upon the rudiments of the grammar, as defined below.

THE WORK TO BE DONE

During the first year the work should comprise:

1. Careful drill upon pronunciation.
2. Writing German from dictation.
3. The memorizing and frequent repetition of easy colloquial sentences.
4. Drill upon the rudiments of grammar, that is, upon the inflection of the articles, of such nouns as belong to the language of every day life, of adjectives, pronouns, weak verbs and the more usual strong verbs; also upon the use of the more common propositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word-order.
5. Abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression.
6. The reading of from 75 to 100 pages of graduated texts from a reader, with constant practice in translating into German easy variations upon sentences selected from the reading lesson (the teacher giving the English), and in the reproduction from memory of sentences previously read.

Among suitable texts for the first year* are: After one of the many Readers especially prepared for beginners,— Meissner: *Aus meiner Welt;* Blüthgen; *Das Peterle von Nürnberg;* Storm: *Immensee,* or any of Baumbach's short stories.

During the second year the work should comprise:

1. The reading of from 150 to 200 pages of literature in the form of easy stories and plays.

2. Accompanying practice, as before, in the translation into German of easy variations upon the matter read and also in the off-hand reproduction, sometimes orally and sometimes in writing, of the substance of short and easy selected passages.

3. Continued drill upon the rudiments of the grammar, directed to the ends of enabling the pupil, first, to use his knowledge with facility in the formation of sentences, and, second, to state his knowledge correctly in the technical language of grammar.

4. Writing German from dictation.

Among suitable texts for the second year are: Gerstaecker: *Germelshausen;* Eichendorff: *Aus dem Leben eines Taugenichts;* Wildenbruch: *Das edle Blut;* Jensen: *Die braune Erica;* Seidel: *Leberecht Hühnchen;* Fulda: *Unter vier Augen;* Benedix: *Lustspiele* (any one). For students preparing for a scientific school a scientific reader is recommended.

For the description of the aural test in German see page 95.

B. Intermediate German

THE AIM OF THE INSTRUCTION

At the end of the intermediate course the pupil should be able to read at sight German prose of ordinary difficulty, whether recent or classical; to put into German a connected passage of simple English, paraphrased from a given text in German; to answer any grammatical questions relating to usual forms and essential principles of the language, in-

* During each year at least six German poems should be committed to memory.

cluding syntax and word-formation, and to translate and explain (so far as explanation may be necessary) a passage of classical literature taken from some text previously studied.

THE WORK TO BE DONE

The work should comprise, in addition to the elementary course, the reading of about 400 pages of moderately difficult prose and poetry, with constant practice in giving, sometimes orally and sometimes in writing, paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; also grammatical drill upon the less usual strong verbs, the use of articles, cases, auxiliaries of all kinds, tenses and modes (with special reference to the infinitive and subjunctive), and likewise upon word-order and word-formation.

Among suitable texts for the third year are: Heyse's, Riehl's, Keller's, Storm's, Meyer's, Ebner-Eschenbach's, W. Raabe's *Novellen* or *Erzählungen;* Schiller: *Wilhelm Tell;* Freytag: *Die Journalisten;* Heine: *Harzreise.*

For the description of the aural test in German see page 95.

FRENCH

A. Elementary French

The requirements in French follow the recommendations of the Committee of Twelve of the Modern Language Association of America.*

THE AIM OF THE INSTRUCTION

At the end of the elementary course the pupil should be able to pronounce French accurately, to read at sight easy

* The report of the Committee of Twelve, which was submitted in December, 1898, may be obtained in separate book-form from D. C. Heath & Co. The lists of texts at present given in the requirements of the College Examination Board were recommended by a committee of the Modern Language Association in December, 1910.

French prose, to put into French simple English sentences taken from the language of every-day life or based upon a portion of the French text read, and to answer questions on the rudiments of the grammar as defined below.

THE WORK TO BE DONE

During the first year the work should comprise:

1. Careful drill in pronunciation.

2. The rudiments of grammar, including the inflection of the regular and the more common irregular verbs, the plural nouns, the inflection of adjectives, participles, and pronouns; the use of personal pronouns, common adverbs, prepositions, and conjunctions; the order of words in the sentence, and the elementary rules of syntax.

3. Abundant easy exercises, designed not only to fix in the memory the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression.

4. The reading of from 100 to 175 duodecimo pages of graduated texts, with constant practice in translating into French easy variations of the sentences read (the teacher giving the English) and in reproducing from memory sentences previously read.

5. Writing French from dictation.

Among suitable texts for the first year are: A well graded reader for beginners; Bruno: *Le tour de la France;* Compayré: *Yvan Gall;* Laboulaye: *Contes bleus;* Malot: *Sans famille.*

During the second year the work should comprise:

1. The reading of from 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographical sketches.

2. Constant practice, as in the previous year, in translating into French easy variations upon the texts read.

3. Frequent abstracts, sometimes oral and sometimes written, of portions of the text already read.

4. Writing French from dictation.

5. Continued drill upon the rudiments of grammar, with constant application in the construction of sentences.

6. Mastery of the forms and use of pronouns, pronominal adjectives, of all but the rare irregular verb forms, and of the simpler uses of the conditional and subjunctive.

Among suitable texts for the second year are: Daudet: *Le Petit Chose;* Erckmann—Chatrian: stories; Halévy: *L'Abbé Constantin;* Labiche et Martin: *Le voyage de M. Perrichon;* Lavisse: *Histoire de France.*

For the description of the aural test in French see page 95.

B. Intermediate French

THE AIM OF THE INSTRUCTION

At the end of the intermediate course the pupil should be able to read at sight ordinary French prose or simple poetry, to translate into French a connected passage of English based on the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

THE WORK TO BE DONE

This should comprise the reading of from 400 to 600 pages of French of ordinary difficulty, a portion to be in the dramatic form; constant practice in giving French paraphrases, abstracts or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation.

Among suitable texts for the third year are: Bazin: *Les Oberlé;* Dumas: novels; Mérimée: *Colomba;* Sandeau: *Mlle. de la Seiglière;* Tocqueville: *Voyage en Amérique.*

For the description of the aural test in French see page 95.

SPANISH

The requirement in Spanish, which follows the form and spirit of the recommendations made for French and German by the Committee of Twelve of the Modern Language Association, is based upon recommendations made by a committee of that Association in December, 1910.

A. Elementary Spanish

THE AIM OF THE INSTRUCTION

At the end of the elementary course the pupil should be able to pronounce Spanish accurately, to read at sight easy Spanish prose, to put into Spanish simple English sentences taken from the language of every-day life or based upon a portion of the Spanish text read, and to answer questions on the rudiments of the grammar, as indicated below.

THE WORK TO BE DONE

During the first year the work should comprise:

1. Careful drill in pronunciation.
2. The rudiments of grammar, including the conjugation of the regular and the more common irregular verbs, the inflection of nouns, adjectives, and pronouns, and the elementary rules of syntax.
3. Exercises containing illustrations of the principles of grammar.
4. The careful reading and accurate rendering into good English of about 100 pages of easy prose and verse, with translation into Spanish of easy variations of the sentences read.
5. Writing Spanish from dictation.

During the second year the work should comprise:

1. The reading of about 200 pages of prose and verse.

2. Practice in translating Spanish into English, and English variations of the text into Spanish.

3. Continued study of the elements of grammar and syntax.

4. Mastery of all but the rare irregular verb forms and of the simpler uses of the moods and tenses.

5. Writing Spanish from dictation.

6. Memorizing of easy short poems.

The emphasis should be placed on careful, thorough work with much repetition rather than upon rapid reading. The reading should be selected from the following: A collection of easy short stories and lyrics, carefully graded; Juan Valera: *El pájaro verde;* Perez Escrich: *Fortuna;* Ramos Carrión and Vital Aza: *Zaragüeta;* Palacio Valdés: *José;* Pedro de Alarcón: *El Capitán Veneno;* the selected short stories of Pedro de Alarcón or Antonio de Trueba.

Every secondary school in which Spanish is taught should have in its library several Spanish-English and English-Spanish dictionaries, the all-Spanish dictionary of the Royal Spanish Academy; one or more manuals of the history of Spanish literature, such as that by Fitzmaurice-Kelly, and Ticknor's *History of Spanish Literature.*

For the description of the aural test in Spanish see page 95.

MATHEMATICS

The present definition of the requirements in Mathematics is in accordance with recommendations made in September, 1913, by a committee of the American Mathematical Society.*

Algebra to Quadratics, AI. The four fundamental operations for rational algebraic expressions, factoring, determination of highest common factor and lowest common multiple by factoring. Fractions, including complex frac-

* The report of the Committee of the American Mathematical Society on Entrance Requirements in Mathematics was published in the *Bulletin* of the American Mathematical Society for November, 1903, vol. IX, no. 2.

tions and ratio and proportion. Linear equations, both numerical and literal, containing one or more unknown quantities. Problems depending on linear equations. Radicals, including the extraction of the square root of polynomials and of numbers. Exponents, including the fractional and negative.

Quadratics and Beyond, AII. Quadratic equations, both numerical and literal. Simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations. Problems depending on quadratic equations. The binomial theorem for positive integral exponents. The formulas for the *n*th term and the sum of the terms of arithmetical and geometrical progressions, with applications.

It is assumed that pupils will be required throughout the course to solve numerous problems which involve putting questions into equations. Some of these problems should be chosen from mensuration, from physics, and from commercial life. The use of graphical methods and illustrations, particularly in connection with the solution of equations, is also expected.

C. Plane Geometry. The usual theorems and constructions of good textbooks,* including the general properties of plane rectilinear figures; the circle and the measurement of angles; similar polygons; areas; regular polygons and the measurement of the circle. The solution of numerous original exercises, including loci problems. Applications to the mensuration of lines and plane surfaces.

D. Solid Geometry. The usual theorems and constructions of good textbooks,* including the relations of planes

* The Board's examination questions in plane and solid geometry will be limited to propositions contained in the syllabus prepared by the National Committee of Fifteen appointed by the American Federation of Teachers of the Mathematical and Natural Sciences and the National Education Association, and to originals based on them. The Report of the Committee was published in *The Mathematics Teacher* for December, 1912. Reprints of the Report may be obtained *gratis* upon application of the Commissioner of Education, Department of the Interior, Washington, D. C.

and lines in space; the properties and measurement of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle. The solution of numerous original exercises, including loci problems. Applications to the mensuration of surfaces and solids.

F. Plane Trigonometry. Definitions and relations of the six trigonometric functions as ratios; circular measurement of angles. Proofs of principal formulas, in particular for the sine, cosine, and tangent of the sum and the difference of two angles, of the double angle and the half angle, the product expressions for the sum or the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulas. Solution of trigonometric equations of a simple character. Theory and use of logarithms (without the introduction of work involving infinite series). The solution of right and oblique plane triangles.

PHYSICS

The present definition of the requirement in Physics was framed by a commission appointed for the purpose by the College Entrance Examination Board in co-operation with other associations.*

General Statement

1. The course of instruction in Physics should include:

(*a*) The study of one standard textbook, for the purpose of obtaining a connected and comprehensive view of the subject. The student should be given opportunity and encouragement to consult other scientific literature.

(*b*) Instruction by lecture-table demonstrations, to be used mainly for illustration of the facts and phenomena of physics in their qualitative aspects and in their practical applications.

*The commission and its work were described in the Ninth Annual Report of the Secretary of the College Entrance Examination Board, pages 4-12.

(*c*) Individual laboratory work consisting of experiments requiring at least the time of 30 double periods, two hours in the laboratory to be counted as equivalent to one hour of class-room work. The experiments performed by each student should number at least 30. The work should be so distributed as to give a wide range of observation and practice.† Princeton University does not require that a candidate offering Physics shall have done laboratory work in that subject. It strongly advises all candidates to do laboratory work when it is possible for them to do it.

The aim of laboratory work should be to supplement the pupil's fund of concrete knowledge and to cultivate his power of accurate observation and clearness of thought and expression. The exercises should be chosen with a view to furnishing forceful illustrations of fundamental principles and their practical applications. They should be such as yield results capable of ready interpretation, obviously in conformity with theory, and free from the disguise of unintelligible units.

Slovenly work should not be tolerated, but the effort for precision should not lead to the use of apparatus or processes so complicated as to obscure the principle involved.

2. Throughout the whole course special attention should be paid to the common illustrations of physical laws and to their industrial applications.

3. In the solution of numerical problems, the student should be encouraged to make use of the simple principles of algebra and geometry to reduce the difficulties of solution. Unnecessary mathematical difficulties should be avoided and care should be exercised to prevent the student from losing sight of the concrete facts in the manipulation of symbols.

† On request the Secretary of the College Entrance Examination Board will furnish a pamphlet containing the list of topics deemed fundamental and the list of experiments suitable for laboratory work in Physics.

N.B. *In lieu of the presentation of a laboratory notebook hitherto required of students who have done laboratory work, Princeton University will hereafter accept the submission of a laboratory certificate signed by the candidate's teacher, describing the work done. In June this certificate should be sent to the Secretary of the College Entrance Examination Board who, on request, will furnish a blank form suitable for the purpose. In September it should be sent to the Registrar of Princeton University.*

CHEMISTRY

The requirement in chemistry is divided into two parts:

Part I contains a minimum list of essential topics. In the examination papers there will be no optional questions on this part, and these questions will count sixty (60) per cent.

Part II is supplementary, and provides for a more extended programme along three main lines, namely:

(*a*) Descriptive chemistry.

(*b*) Chemical principles or theories.

(*c*) Applications of chemistry in the household or in the arts.

This part of the examination paper offers a choice of questions and will count forty (40) per cent. In his answers the candidate must confine himself to two out of three groups of questions.

The teacher may thus devote the time to any two of the three groups indicated, and so adapt his course to local conditions or personal preference. It should be clearly recognized that thoroughness in teaching must not be sacrificed to an attempt to cover the topics named in all three of the groups.

It is required that the candidate's preparation in chemistry should include:

1. Individual laboratory work, comprising at least forty

exercises selected from a list of sixty or more, not very different from the list suggested by the College Entrance Examination Board.

2. Instruction by lecture-table demonstrations, to be used mainly as a basis for questioning upon the general principles involved in the pupil's laboratory investigations.

3. The study of at least one standard textbook to the end that the pupil may gain a comprehensive and connected view of the most important facs and laws of elementary chemistry.

Teachers of chemistry preparing candidates to enter the University, or the candidates themselves, are advised to write to the Secretary of the College Entrance Examination Board for a *pamphlet, which will give full information as to all the requirements in chemistry.*

N.B. *In lieu of the presentation of a laboratory notebook hitherto required, Princeton University will hereafter require the submission of a laboratory certificate, signed by the candidate's teacher, describing the work done. No credit will be given for the examination in chemistry unless accompanied by such a certificate. In June this certificate should be sent to the Secretary of the College Entrance Examination Board, who, on application, will furnish a blank form suitable for the purpose. In September it should be sent to the Registrar of Princeton University.*

ASIATIC STUDENTS

Any candidate for admission who is a native of Asia, and not of American or European parentage, may offer, as a substitute for the regular requirement in Latin an equivalent in Arabic, Chinese, Sanskrit, or Pali. A candidate who wishes to make this substitution should notify the Registrar not later than March 1 of the year in which he plans to enter.

ADMISSION TO SPECIAL COURSES

In exceptional cases students are admitted to the privileges of the University, not as members of any one of the four regular classes or as candidates for a degree, and are allowed to take special undergraduate courses, selected under the direction of the Faculty, in such a manner as to secure as full an employment of their time as in the regular course. Such special students are subject to the same regulations and discipline and to the same examinations in the studies pursued as other undergraduates. Any one desiring to enter as a special student is expected to take the regular entrance examinations upon the subjects prerequisite to his courses and to pass a sufficient number of subjects to show that he has an amount of preparation equivalent to that required of regular students. These special courses, however, are not offered to those who attempt to enter the regular course and fail to do so, nor to those who have failed in the regular course.

When special students are finally leaving the University, certificates of proficiency, signed by the President and Registrar, may be granted them on report by the Committee on Examinations and Standing that they have completed the courses on their schedule.

STUDENTS PURSUING PARTIAL COURSES

Students in the Princeton Theological Seminary, or other properly qualified persons, may be admitted to one or more undergraduate courses in the University. Such students shall be entered as undergraduates in the catalogue under the caption, Students Pursuing Partial Courses. Students in the Princeton Theological Seminary are admitted to these courses without charge; but other persons are charged at the rate of $20.00 a course.

ADMISSION FROM OTHER COLLEGES

A candidate coming from another college to which he was admitted by certificate will be held for the Princeton freshman entrance requirements in each subject in which his standing in his former college was not in the upper half of his class. Such of these requirements as are not satisfied by examination at the time of admission must be satisfied in accordance with the rules which apply to students regularly admitted upon examination.

The candidate's credits for courses taken in the college from which he comes will be accepted in so far as these courses are equivalent to courses given at Princeton. If his credits show that he has an amount of preparation equivalent to that required of a regular freshman, he will be admitted and will be classified as a Student Qualifying for Regular Standing. He will be assigned to those courses for which he is qualified, preference being given to such of the required courses as he may not have had. If at the end of two terms of residence in Princeton his work has been satisfactory, he may be enrolled as a regular student, his status being determined by his credits; or, in case he qualifies for it, he may receive a degree with the graduating class. In the meantime he will be subject to the same regulations and discipline as a regular student.

No person is admitted to the University as a candidate for a Bachelor's degree, or for the degree of Civil Engineer, after the beginning of the first term of the senior year.

REGULATION CONCERNING SECRET SOCIETIES

Immediately after the beginning of the academic year the students entering the Undergraduate Department meet according to announcement for matriculation; and subscription to the following pledge is required by the Board of Trustees:

We, the undersigned, do individually for ourselves promise, without mental reservation, that we will have no active connection whatever with any secret society, nor be present at the meetings of any secret society in this institution so long as we are members of Princeton University, it being understood that this promise has no reference to the American Whig and Cliosophic Societies. We also declare that we regard ourselves bound to keep this promise and on no account whatever to violate it.

PART I

PLAN OF UNDERGRADUATE STUDY

PLAN OF UNDERGRADUATE STUDY

The courses of study offered to candidates for a bachelor's degree extend through four academic years, and lead to the degrees of Bachelor of Arts (A.B.), Bachelor of Letters (Litt.B.), and Bachelor of Science (B.S.). The degree of Bachelor of Arts (A.B.) is open to those who, entering with Greek, fulfill the full classical requirements of freshman and sophomore years; candidates for the degree being free, after the two introductory years, to choose their studies in whatever department they prefer, whether philosophical, literary, or scientific. The degree of Bachelor of Letters (Litt.B.) is open to those who, having substituted for Greek at entrance either French or German or one of those languages and physics or chemistry, concentrate their studies in junior and senior years in one of the philosophical, literary, political, or other humanistic departments. The degree of Bachelor of Science (B.S.) is open to those who, entering with a similar substitution for Greek, concentrate their studies in junior and senior years in one of the mathematical or scientific departments. The degree of Civil Engineer is conferred upon those who complete the full course in Civil Engineering, as outlined on succeeding pages.

The schedule of every sophomore, junior, and senior who is a candidate for a bachelor's degree consists of five courses of three hours a week, subject only to the established exemptions for candidates for Final Special Honors.

The various courses of study offered are open only to students of that year to which the courses belong, except in cases where students are allowed or required to take a course belonging to a preceding year.

THE FRESHMAN YEAR

Candidates for the A.B. degree have in freshman year seventeen class exercises a week of which two are in English, four in Latin, four in Greek, four in Mathematics, and three in the modern language offered at entrance. Any candidate for the A.B. degree who passes either French B or German B at entrance may elect an advanced course in the subject passed by him, or may begin the other modern language which he did not offer for entrance.

Candidates for the Litt.B. or B.S. degree have seventeen class exercises a week of which two are in English, four in Latin, four in Mathematics, four in Physics or Chemistry, and three in a modern language.

A course in Hygiene, one hour a week, both terms, and a course in Physical Education, three periods a week, both terms, are also required of all freshmen, but the hours or periods of these courses are not to conflict with the hours regularly scheduled for each individual student in the curriculum.

FRESHMAN SCHEDULE

A.B.		Litt.B. or B.S.	
Greek	4 hours	Physics or Chemistry	4 hours
Latin	4 "	Latin	4 "
Mathematics	4 "	Mathematics	4 "
English	2 "	English	2 "
Mod. Lang.	3 "	Mod. Lang.	3 "
Hygiene	1 "	Hygiene	1 "
Physical Education	3 "	Physical Education	3 "
	21		21

THE SOPHOMORE YEAR

The sophomore courses, required and elective, arranged so as to include elementary courses prerequisite to the subsequent studies of the various departments, are as follows:

SOPHOMORE A.B.—REQUIRED

Introduction to Philosophy
Greek (1st term); Latin (2nd term)
Physics or Chemistry

SOPHOMORE A.B.—ELECTIVE (*Two courses to be taken*)

History
Latin (1st term); Greek (2nd term)
French (Advanced or Beginners')
German (Advanced or Beginners')
Spanish or Italian
English
Mathematics
Physics
Chemistry
Geology
Biology

SOPHOMORE LITT.B. AND B.S. [for students who have taken Physics in Freshman year]

REQUIRED

Introduction to Philosophy
Two of
Latin, Mathematics, Physics (second course)
or Chemistry (first course)

ELECTIVE (*Two courses to be taken*)

History
Latin
French (Advanced or Beginners')
German (Advanced or Beginners')
Spanish or Italian
English
Mathematics
Physics (second course)
Biology (with Chemistry)
Geology
Graphics, if Mathematics is taken

SOPHOMORE LITT.B. AND B.S. [for students who have taken Chemistry in Freshman year]

REQUIRED

Introduction to Philosophy
Two of
Latin, Mathematics, Physics (first course)
or Chemistry (second course)

ELECTIVE (*Two courses to be taken*)

History
Latin
French (Advanced or Beginners')
German (Advanced or Beginners')
Spanish or Italian
English
Mathematics
Physics (first course)
Chemistry (second course)
Biology
Geology
Graphics, if Mathematics is taken

The student's choice of a department for junior and senior years is to some extent conditioned by his selection of electives in the sophomore year.

THE JUNIOR AND SENIOR YEARS

Every junior and senior in candidacy for a Bachelor's degree is enrolled either under the general plan of study, taking five three-hour courses, or as a candidate for Final Special Honors, taking four three-hour courses. In either event he must take at least two, and in some cases three, three-hour courses in some one department. When three three-hour courses throughout the year are required of Departmental students, it is so indicated in the following lists. The regulations for Final Special Honors are given in the section entitled "Final Special Honors" on page 127.

LIST OF COURSES OF JUNIOR YEAR

[The numbers prefixed to the courses in the following list refer to the description of those courses on later pages. All courses three hours a week. First term courses have odd numbers; second term courses have even numbers.]

A. DIVISION OF PHILOSOPHY

I. *Department of Philosophy*

Two courses throughout year required of Departmental students, one of which must be 301, 302. History of Philosophy.

301, 302. History of Philosophy

303. Problems of Psychology. 304. Advanced Logic

305. General Psychology. 306. Genetic Psychology

(*Advised elective:* 303, 304. Constitutional Government and Jurisprudence)

II. *Department of History and Politics*

301, 302. European History

303. Constitutional Government. 304. Jurisprudence

305. Greek History. 306. Roman History

(*Requisite cognate course:* 305, 306. Economics)

(*Advised elective:* 301, 302. History of Philosophy)

III. *Department of Economics and Social Institutions*

Three courses throughout year required of Departmental students

305, 306. Elements of Economics

307, 308. Historical and Descriptive Economics

309. Elements of Accounting; 312. Statistical Methods

IV. *Department of Art and Archaeology*

301. Ancient Art. 302. Mediaeval Art

303, 304. Ancient and Mediaeval Architecture

305, 306. Architectural Drawing

B. DIVISION OF LANGUAGE AND LITERATURE

V. *Department of Classics*

319. Theocritus. 320. Plato

305. Greek History. 306. Roman History

(*Advised electives* 301, 302. History of Philosophy)

307. Roman Satire. 308. Latin Philosophical Essays

313. Greek Comedy. 314. Greek Tragedy

317. Latin Literature. 318. Roman Literature

VI. *Department of English*

301. English Literature (The Renaissance). 302. Shakespeare

303. Chaucer. 304. History of the English Language

305. 306. Advanced Public Speaking

VIIa. *Department of Modern Languages. Germanic Section*
301, 302. German Literature (Opitz to Lessing)
303, 304. German Literature (Goethe)

VIIb. *Department of Modern Languages. Romanic Section*
301, 302. French Literature (17th century)
305, 306. Italian
307, 308. Spanish

C. Division of Mathematics and Science

VIII. *Department of Mathematics*
305, 306. Coördinate Geometry
307, 308. Analysis
309, 310. Analytical Mechanics

IX. *Department of Physics*
301, 302. Experimental Physics
309, 310. Analytical Mechanics
Honors Courses in Mathematics and Physics
305, 306 A. Coördinate Geometry
307, 308 B. Analysis
309, 310 C. Analytical Mechanics
311, 312 D. Theoretical Physics
313, 314 E. Experimental Physics

X. *Department of Chemistry*
General Physics required, unless already taken
301. Qualitative Analysis and 302. Quantitative Analysis I or 401, 402. Quantitative Analysis II, III
305. Physical Chemistry I and 306. Organic Chemistry I

XI. *Department of Geology*
201, 202. Geology (If not taken in sophomore year)
301, 302. Structural Geology
303. Descriptive Mineralogy. 304. Determinative Mineralogy
306. General Palaeontology (second term)
[Either 304 or 306 must be taken; the other may be taken as a free elective]
(*Requisite cognate course:* Biology through the year, or Chemistry through the year, or Graphics and Surveying)

XII. *Department of Biology*

201, 202. General Biology

303, 304. Botany

305. Comparative Osteology; 306. Invertebrate Zoölogy

(Students electing the Department take two courses throughout junior year. General Biology 201, 202 must be one of them, if it was not taken in sophomore year. Students who took Biology 201, 202 in sophomore year elect 303, 304 and 305, 306 (*Requisite cognate course:* Chemistry 303, 304 through the year).

XIII. *Department of Astronomy*

301. Elementary Astronomy; 302. Stellar Astronomy

(Cognate course required of candidates for Honors in Astronomy)

Nautical Astronomy

Junior courses which are not included in any one of the Departments above:

302. Surveying

302. Physical Geography

301, 302. Military History, Strategy, Tactics

LIST OF COURSES OF SENIOR YEAR

A. Division of Philosophy

I. *Department of Philosophy*

401. Fundamental Problems in Philosophy

402. Present Philosophical Tendencies

403, 404. Experimental Psychology

405. History of Greek Philosophy

407, 408. Ethics

II. *Department of History and Politics*

401, 402. English History

403, 404. American History

405. Municipal Government (1st term)

406. Federal and State Government (2nd term)

407, 408. International Law and Diplomacy

409, 410. Constitutional Interpretation and Administrative Law

421, 422. Roman Law

II. *Department of Economics and Social Institutions*
409. Money and Banking; 410. Public Finance
411. European Economic Policy (1st term)
414. Social Economics (2nd term)
415. Corporation Finance; 418. Principles of Accounting

IV. *Department of Art and Archaeology*
401. Italian Sculpture; 402. Greek Sculpture
405. Italian Painting; 406. Northern Painting
407, 408. Classical Architecture
409, 410. Allied Elements.

B. Division of Language and Literature

V. *Department of Classics*
419. Greek Epic Poetry; 420. Virgil
421, 422. Roman Law
401. Lucretius; 402. Roman Elegiac Poets
413. Tacitus; 414. Cicero's Political Writings.
415. Greek Lyric Poets; 416. Aristotle or 416 A. Thucydides.
423. Classical Influences (1st term)

VI. *Department of English*
Three courses throughout year required of Departmental students
401. English Literature (Restoration and 18th century);
402. English Literature (17th century)
403. English Romanticism; 404. English Literature of the Victorian Period
405. Elementary Old English; 406. Advanced Old English
407, 408. Advanced Composition
409. Classical Influences in English Literature; 410. Poetics

VIIa. *Department of Modern Languages. Germanic Section*
401, 402. German Literature (19th century)
403, 404. German Literature (Middle High German)

VIIb. *Department of Modern Languages. Romanic Section*
401, 402. French Literature (Romantic Movement)
403, 404. Old French
405, 406. French Literature (18th and 16th centuries)
407, 408. Italian Literature
409, 410. Spanish Literature

C. Division of Mathematics and Science

VIII. *Department of Mathematics*

403, 404. Differential Geometry
405, 406. Algebra
407, 408. Projective Geometry
409, 410. Analysis

IX. *Department of Physics*

401, 402. Theoretical Physics (Light and Heat)
403, 404. Theoretical Physics (Electricity and Magnetism)
Honors Courses in Mathematics and Physics
403, 404. Differential Geometry
405, 406. Algebra
411, 412. c. Applied Mathematics: Electricity and Magnetism
413, 414. d. Theoretical Physics
415, 416. e. Experimental Physics
401, 402. f. Celestial Mechanics

X. *Department of Chemistry*

Three courses throughout year required of Departmental students:
401. Quantitative Analysis II
403. Organic Chemistry II
405. Physical Chemistry II
410. Advanced Inorganic Chemistry, together with any two of
402. Quantitative Analysis III
404. Organic Chemistry III
406. Physical Chemistry III
or (for those who have taken 401, 402. Quantitative Analysis II and III in Junior year)
403. Organic Chemistry II; 404. Organic Chemistry III
405. Physical Chemistry II; 406. Physical Chemistry III
407. Rise and Development of Chemical Theories;
410. Advanced Inorganic Chemistry
Electives:
402. Quantitative Analysis III
404. Organic Chemistry III
406. Physical Chemistry III
407. Rise and Development of Chemical Theories

XI. *Department of Geology*
Three courses throughout year required of Departmental students
401, 402. Historical Geology
403. Structural and Dynamic Geology; 404. Economic Geology
405, 406. Practical Geology
407. Crystallographic Mineralogy; 408. Optical Mineralogy

XII. *Department of Biology*
Three courses throughout year required of Departmental students
401. Comparative Anatomy of Vertebrates; 402. Embryology
403. Histology. 404. Histology, or 406. Palaeontology
407, 408. Physiology
409, 410. Genetics

XIII. *Department of Astronomy*
401, 402*f*. Celestial Mechanics
403, 404. Practical Astronomy
Navigation and Seamanship. Nautical Astronomy.

Senior courses which are not in any one of the Departments above:

401, 402. Sanskrit
407. History of Modern Science (1st term)
401. History of Psychology of Education (1st term)
401, 402. Heat Engines

METHOD OF UNDERGRADUATE INSTRUCTION

Instruction in Physics, Chemistry, Biology, and Astronomy is given not only by means of lectures and formal tests upon textbooks, but also by means of practical experimental work in the several laboratories and in the working observatory. In Mathematics, besides the stated class exercises and occasional lectures, certain hours are set apart each week during which the instructors of the Department are accessible for informal consultation by all students who wish further explanation or discussion of such portions

of their mathematical work as most interest them or give them the most difficulty. In Geology, similarly, there is field work and constant informal resort to the geological museum, added to frequent conferences with the instructors in the several courses on the reading assigned.

Instruction in what may be called the reading departments, Philosophy, History and Politics, Economics and Social Institutions, Art and Archaeology, and the languages, is given chiefly by means of informal conferences on the reading assigned. A "course" consists, not of the lectures given in connection with it or of the study of a particular textbook relied on by the lecturer, but of a prescribed body of reading to which the lectures given are complementary. In each course the student is made responsible to a particular preceptor for his reading, and reports to him once a week for conference. The student is expected to attend every conference, and may be absent only for unavoidable reasons. Failure to keep his preceptorial appointments will affect his final standing.

At each conference the preceptor usually meets from three to six of the men assigned him. The methods of conference differ, of course, with the character of the subject, but are always informal, being intended not as a quiz or recitation or drill nor as a method of coaching, but, so far as the preceptor is concerned, as a means of finding out how thoroughly and intelligently the student has done his reading, and, so far as the student is concerned, as a means of stimulation and enlightenment with regard to the study in hand. His work is explained to him where it is obscure, and its scope and implications are extended out of the wider reading and maturer scholarship of the preceptor. Study centers upon these conferences, as in the scientific departments it centers upon the laboratory. They are meant to supply to study the life which it cannot have

in the formal exercises of the classroom and to bring the students into an intimate contact with their teachers which is hardly possible in other methods of instruction.

One result of this method of instruction is to lay the principal emphasis of work upon the constant reading required, upon what is ordinarily called "term work," rather than upon preparation for occasional examinations. In reckoning the "standing" of a student more weight is given to his work with his preceptor than to his performance in examination. Each preceptor is expected to report in departmental meeting upon the work of the men assigned him, and it is only upon his recommendation that they are admitted to examinations. He may recommend the debarment from examination of any of the men assigned to him who seem to have neglected their work or to have done it too indifferently. He makes no formal report to any university officer of their absences from his appointed conferences or of their attendance, but forms his own estimate of their thoroughness and faithfulness and gives his judgment upon the basis of an intimate observation.

Members of the Faculty of all ranks do "preceptorial" work; those who lecture or conduct the formal class exercises acting as preceptors as well as those who devote the principal part of their time to this special method of teaching.

HONORS

Honors are of two kinds, *General* and *Special.*

General Honors are awarded for general excellence in studies at the close of freshman and sophomore years according to the following provisions: At the close of the freshman and sophomore years High General Honors are given to those whose average rank for the year is within the first general group, and General Honors to those whose

average rank for the year is within the second general group. No General Honors are awarded after the sophomore year.

FINAL SPECIAL HONORS

OPEN TO CANDIDATES FOR A BACHELOR'S DEGREE

Final Special Honors are based on the work of the junior and senior years and are awarded at graduation only. The regulations concerning Final Special Honors are as follows:

1. A student who has attained a standing of first or second general group at the end of sophomore year may be enrolled as a candidate for Final Special Honors on his own request.

A student whose standing at the end of sophomore year is not lower than the third general group, and within the first or second group in the department he proposes to enter or in courses preliminary thereto, may be enrolled on his own request as a candidate for Final Special Honors in that department.

Any student who at the end of sophomore year falls short of these requirements may be enrolled only on the recommendation of the department or departments concerned.

A student who has been enrolled under the general plan of study during the first term of his junior year but who during that term has maintained a standing at least as high as is required of a candidate for Honors that he may continue in candidacy (see § 6), may be enrolled at the beginning of the second term of his junior year as a candidate for Final Special Honors on the recommendation of his department.

A student who has been enrolled under the general plan of study during his junior year but who during that year has maintained a standing at least as high as is required of

a candidate for Honors that he may continue in candidacy (see § 6), may be enrolled at the beginning of his senior year as a candidate for Final Special Honors on the recommendation of his department.

Final Special Honors may be awarded to a senior who has not taken the junior year in Princeton.

2. Every junior or senior in candidacy for a bachelor's degree who is enrolled as a candidate for Final Special Honors shall have a schedule of four courses, of which at least two shall be in some one department.

3. A candidate for Final Special Honors shall do more advanced work in the courses of his department than is required of a student who is enrolled under the general plan of study.

4. A candidate for Final Special Honors shall take a final comprehensive examination which shall consist of not less than two written papers of three to four hours each, or one paper of three to four hours supplemented by an oral examination of one hour. Special tests on laboratory work, or the preparation of a thesis, may be required in addition.

There shall be no second term senior examinations in departmental courses for candidates for Final Special Honors.

5. Final Special Honors are of three grades, Highest Honors, High Honors, and Honors. They are based upon the standing which a student has maintained in the courses of his department in junior and senior years and upon the final comprehensive examination.

6. No candidate for Final Special Honors may continue in candidacy if at the close of any term he fails to maintain an average second group standing in the courses required in his department and taken by him up to that time, or fails to maintain an average standing of third general group calculated from the beginning of junior year. In case of

such a failure, he shall be required to enroll under the general plan of study. At the end of an additional term after such a failure a student who has regained an average standing of second group in his department courses and third general group, in both cases calculated from the beginning of junior year, may be enrolled as a candidate for Final Special Honors.

DEPARTMENT OF CIVIL ENGINEERING

THE COURSE OF STUDY

The course in civil engineering is a prescribed sequence of work aiming to develop the mental powers of the student and to train him, at the same time, in the fundamental principles and methods of engineering. It occupies four years and leads to the degree of Civil Engineer.

The two-fold purpose of seeking, in a four year course, to educate broadly as well as professionally necessarily requires a larger number of subjects and student work-hours per week than is generally found in the academic course. The intimate contact of the civil engineering students with the academic and the participation of the former in all university activities is regarded as a valuable part of their general training, making for a broad, cultured, all around manhood. At the same time, the successful prosecution of the engineering course requires a serious interest, a concentration of purpose, and a cheerful acceptance of the larger amount of work and work-hours involved.

A high degree of specialization in the undergraduate engineering course is avoided. On the other hand, the close relationship between civil, mechanical and electrical engineering is recognized and provided for by fundamental courses in these last two fields.

About half of the subjects of the curriculum are general or only partly technical. They offer the necessary foundation for the technical work, give breadth of view, and have in themselves a direct practical bearing upon the engineer's life work. Thus considerable time is allotted to English, mathematics, economics, and the physical sciences (chemistry, physics and geology).

In the work in English, the need of a proficient command of written and spoken English by the engineer is recognized. In the freshman year considerable attention is given to the principles and practice of technical writing, much material for the themes being obtained from visits to engineering works and lectures by outside practicing engineers. The senior course is designed to give practice in public speaking and to train the young engineer to prepare clear, well written reports, and to explain or defend them in public.

The mathematical training of the engineer should be especially thorough, and the courses in this field, extending over the first three years, are arranged with the needs of the engineer in view. The work in analytical mechanics begins early in the course (sophomore year), and supplements in an intimate manner the more symbolic processes of the pure mathematics.

The course in economics in the senior year recognizes the value to an engineer of a clear understanding of the broad principles underlying modern industrial life. While emphasis is placed upon the fundamental principles of economics, the student is given opportunity to study some of the special problems of particular interest to engineers.

The sophomore courses in physics prepare directly for the work in thermodynamics and electrical engineering occurring later in the course.

The technical work begins properly with the course in engineering drawing in the freshman and sophomore years. The aim of this course is to train the student to understand a complex object, such as a part of a machine or structure in all of its relationships, and to express it by free-hand sketch and mechanical drawing in proper engineering form. He is required to think, to visualize, and to use drawing as a language for the formal expression of mental concepts.

The sophomore course in graphics includes descriptive geometry and its applications. Stress is laid upon the technique of drawing.

The study of surveying and engineering field work is provided for in the courses under the general heading geodesy. The structure, adjustment, and use of the instruments are made subjects of special attention, and no student is allowed to participate in any extended field operation until he has passed a 100% test in both level and transit adjustments, and has acquired a certain dexterity in handling the instruments used therein. A special feature of the course in geodesy is the stress laid on the orderly collection and verification of field notes by each student, and on their appropriate use in the preparation of different kinds of plans, maps, and charts of surveys. During the two weeks immediately following the close of the second term the junior class goes into camp in close proximity to a suitable body of water in the locality selected by the professor of geodesy and members of the class, where it engages in hydrographic, stadia, and triangulation surveys. At the close of the summer vacation period this class is required to report to the professor of geodesy in Princeton on the Monday morning preceding the week of the opening of the term (September 16th in 1918), for an extended railway location survey in the vicinity of Princeton. The method of conducting this work is similar to that of the summer camp, and the student is required to give his entire time to it until noon of the Friday of the first week of the term.

The remaining technical studies of the course, beginning with the junior year, may be grouped under the following heads: structural, mechanical, electrical, and hydraulic engineering.

The structural group includes the courses in mechanics of materials, materials testing laboratory, reinforced concrete,

and structural design, in the junior year, and framed structures, foundations and reinforced concrete design, in the senior year. It covers steel and concrete bridges, buildings, and other engineering structures. Stress is laid upon fundamental theory, but the latter is constantly applied to the actual design of engineering structures.

The mechanical group, developing directly from the earlier course in engineering drawing, includes machine design in the junior year and heat engines in the senior. In the former particular attention is given to the mechanism for the transmission of power, especially for large moving structures. The latter covers thermodynamics and the elements of heat power engineering, steam and gas engines, steam and water turbines. The classroom work in this course is supplemented by practical work in the heat engine laboratory.

The course in electrical engineering is a general one, especially designed for the needs of the civil engineer. It covers direct currents in the first term and alternating currents in the second, and is supplemented by considerable laboratory practice.

The hydraulic group incudes hydraulics, supplemented by work in the hydraulic laboratory, and hydrodynamics, and their application to problems of water power development, municipal water supply, and sewerage systems.

Some flexibility is given to the curriculum in the senior year by the presence of elective subjects.* The list of such subjects is not final and will be modified as future needs require. In general the selection will be made from this list, but students having a definite purpose in view may, with the approval of the department, elect other courses which have no important relation in their future work. In particular, students expecting to enter metallurgical, mining or geologic work may elect one or two terms of mineralogy.

*See page 135.

The following is the synopsis of the course in civil engineering:

THE FRESHMAN YEAR

First Term		*Second Term*	
English	3	English	3
Physics	4	Physics	4
Mathematics	4	Mathematics	4
Chemistry	4	Chemistry	4
Engineering Drawing	2	Engineering Drawing	1
Geodesy	1	Geodesy	2
Hygiene	1	Hygiene	1
Physical Education	3	Physical Education	3
Total	22	Total	22

THE SOPHOMORE YEAR

First Term		*Second Term*	
Physics	3	Physics	3
Mathematics	4	Mathematics	4
Analytical Mechanics	3	Analytical Mechanics	3
Engineering Drawing	2	Graphics	2
Graphics	2	Geodesy	3
Geodesy	3	Geology	3
Total	17	Total	18

THE JUNIOR YEAR

First Term		*Second Term*	
Analytical Mechanics	3	Hydraulics	3
Mechanics of Materials	4	Reinforced Concrete	3
Laboratory	2	Laboratory	1
Geodesy	3	Geodesy	3
Machine Design	2	Machine Design	2
Electrical Engineering	3	Electrical Engineering	3
		Structural Design	3
Total	17	Total	18

Summer Camp

THE SENIOR YEAR

First Term		*Second Term*	
Railway Location Survey			
Economics	3	Economics	3
Heat Engines	3	Heat Engines	3
English	2	English	2
Framed Structures	4	Framed Structures	4
Elective	4	Elective	5
Water Power	4		
Total	18	Total	17
*Electives:		*Electives:	
Railway Economics	2	Water Supply	2
Concrete Constructions	2	Gas Engines	2
Sewerage	2		

INTENSIVE COURSE IN CIVIL ENGINEERING

From an industrial as well as the military point of view it is desirable that during and perhaps immediately after the war young men intending to be engineers should complete their technical training and get into some form of service, particularly industrial service, at an earlier age than heretofore. It is also equally important that students who desire and are prepared to enter an engineering school, but who at this time are unwilling to spend four years in college, should be encouraged to carry out their intention. In order therefore to encourage them to enter college and complete their courses as usual on the one hand, and to enable them to graduate at least one year earlier than formerly on the other, an intensive course in civil engineering is offered. This course will begin with the year 1917-1918, provided a sufficient number of acceptable candidates is enrolled.

The course will occupy three years and will include two summer terms of nine weeks each at the close of the fresh-

*See page 133.

man and sophomore years respectively. Like the regular four year course which it parallels but does not displace it will lead to the degree of Civil Engineer. The studies in the curriculum, the number of hours per week and the actual amount of ground covered will remain about the same as in the regular four year course. The small difference in the total number of hours will be equalized by the intensive quality of the work of the three year course. Only those students whose class work is satisfactory will be permitted to elect or to remain in the intensive course.

The studies of the freshman year are the same for both courses, the first marked separation of the two groups occuring at the beginning of the first summer term. Students who elect the intensive course, however, will be required to signify their intention at the beginning of the second term and may if it seems desirable be placed in separate classes at that time.

The summer term will begin immediately after the close of the second term and will continue for nine weeks until about the middle of August. This arrangement will leave a five weeks vacation period before the reopening of college. The studies of the summer term will not be essentially different in character from those of the college terms except that they will be taken wholly from the mathematical and technical groups and especially from those including field drawing and design work.

FINAL SPECIAL HONORS IN CIVIL ENGINEERING

Final Special Honors in Civil Engineering are based on the regular work only of the junior and senior years and are awarded at graduation. The regulations for admission to candidacy, continuation in candidacy, and grades of Honors awarded are the same as those for Final Special Honors in the courses leading to the bachelors' degrees.

PART V

DEPARTMENTS OF THE UNIVERSITY

*COURSES OF INSTRUCTION

A. DIVISION OF PHILOSOPHY

I. DEPARTMENT OF PHILOSOPHY AND PSYCHOLOGY

THE PRESIDENT, PROFESSORS †WARREN, †KEMP SMITH, JOHNSON, †BOWMAN, SPAULDING, FITE (CHAIRMAN), WHITNEY, MC COMAS, AND LONGWELL; DR. COTTON.

201, 202. Introduction to Philosophy: General Philosophy, Psychology, and Ethics. Hibben: *Problems of Philosophy;* Plato: *Euthyphron, Apology, Crito* and *Phaedo;* Locke: *Essay on the Human Understanding;* James: *Psychology;* Hyde: *Five Great Philosophies of Life.* Sophomore required course, both terms, 3 hours a week. Lecturers, the President, Professors Spaulding and Fite; classroom instructors, Professors Johnson, Spaulding, Fite, Whitney, and Longwell.

301. History of Philosophy. Greek and Mediaeval Philosophy. Lectures and Collateral reading. Junior course, first term, 3 hours a week. Prerequisite to History of Philosophy of second term. Lecturer, Professor Longwell; Preceptors, Professors Johnson, Whitney, and Longwell.

302. History of Philosophy. Modern Philosophy. Lectures and collateral reading. Junior course, second term, 3 hours a week. Prerequisite course: History of Philosophy of first term. Lecturer, Professor Longwell; Preceptors, Professors Johnson, Whitney and Longwell.

303. Advanced Psychology. Lectures, preceptorial read-

* Courses between 101 and 200 are for freshmen, between 201 and 300 for sophomores, between 301 and 400 for juniors, and between 401 and 500 for seniors. Odd numbered courses are for first term, even numbered for second.
† Absent.

ing, and fortnightly reports. Study of such topics as the nature and scope of psychology, the relation of body and mind, the subconscious, the nature of the stream of thought, the nature and implications of the consciousness of self, emotion, the analysis of voluntary activity, etc. Junior course, first term, three hours a week. Professor Johnson.

304. Logic. Lectures and preceptorial conferences. Junior course, second term, 3 hours a week. Professor Whitney.

305. General Psychology. Outline of the science of psychology. Functions of brain and nervous system. Laws of human behavior and consciousness; their application to everyday life. Lectures, demonstrations, collateral reading, and written analyses. Junior course, first term, 3 hours a week. Professor McComas.

306. Genetic Psychology. Evolution of behavior and consciousness in the lower species and man. Lectures, theses, and collateral reading. Junior course, second terms, 3 hours a week. Professor Warren. [Not given, 1917-1918.]

*401. Fundamental Problems of Philosophy. Discussion, historical and systematic, of the main current topics of philosophy, materialism, agnosticism, idealism. Paulsen: *Introduction to Philosophy*. Previous knowledge of technical metaphysics is not required. Senior course, first term, 3 hours a week. Professor Fite.

*402. Present Philosophical Tendencies. A presentation of the main philosophical positions receiving discussion at the present time, together with an examination of problems and an analysis of methods. Senior course, second term, 3 hours a week. Professor Spaulding.

* Also listed as a graduate course.

403. Experimental Psychology. Introductory course. Psychophysical methods, analysis of sensation, reaction, and study of the common senses. Lectures and work in the laboratory. Senior course, first term, 3 hours a week. General Psychology 305 is recommended to be taken as preparatory to this course. Professor McComas.

404. Experimental Psychology. Continuation of 403. Special senses; space perception and illusions; higher intellectual processes. Lectures and work in the laboratory. Senior course, second term, 3 hours a week. Professor McComas.

*405. History of Greek Philosophy. Lectures and collateral reading. Detailed study will be made of the Pre-Socratic fragments, and of some of the chief works of Plato and Aristotle. History of Philosophy 301 should, if at all possible, be previously taken in junior year. Senior course, first term, 3 hours a week. Professor Bowman. [Not given, 1917-1918.]

*407, 408. Ethics. A study of the deeper moral problems and of the historic types of ethical theory, with their philosophical background. The bearing of ethical theory upon social and political issues and upon the practical problems of individual life. Lectures and preceptorial reading. Senior course, both terms, 3 hours a week. Professor Fite.

FINAL SPECIAL HONORS

Two courses in the Department are to be taken throughout junior and senior years.

Final Special Honors may be taken either in Philosophy or in Psychology. In Philosophy the additional Honors work shall be as follows:

Plato: *Republic*†

* Also listed as a graduate course.

Aristotle: *Ethics*
Descartes: *Meditations*†
Berkeley: *Principles of Human Knowledge*†
Hume: *Enquiry Concerning the Human Understanding*†
Spinoza: *Ethics,* or Leibnitz: *Selections*
Kant: *Critique of Pure Reason*†
Kant: *Critique of Practical Reason*†
Green: *Prolegomena to Ethics*
Sigwart: *Logic* (portions only)
William James: *Principles of Psychology*†

[Note: The books marked by a dagger are already employed, in whole or part, as reading in the regular courses.]

In Psychology the additional Honors work shall be as follows:

Reading and research in
(1) Color Vision
Space Perception (analytic, genetic, experimental, theory)
Association (historical, experimental)
Emotion (theories, laboratory tests)
Attention and Volition
Psychophysical Methods and Problems, and
(2) British Philosophy from Bacon to Hume, with reading of
Locke: *Essay Concerning the Human Understanding* (portions only)
Berkeley: *Principles*† and *Dialogues*
Hume: *Treatise on Human Nature* (Book 1)
Leibnitz: *Selections*

Candidates for Final Special Honors in Psychology shall take at least one course in Psychology in each term of junior and senior years.

Candidates for Final Special Honors in Philosophy or Psychology shall take the usual term examinations in junior and senior years, except that in place of the regular second term senior examinations a set of final examinations on the additional Honors work of junior and senior years will be substituted.

Each candidate for Final Special Honors is also required

by March 14th of senior year to present a thesis on some central topic; the subject proposed to be reported to and approved by the Department not later than the close of junior year.

For graduate courses in Philosophy, see under the Graduate School.

II. DEPARTMENT OF HISTORY AND POLITICS

PROFESSORS *PAUL VAN DYKE, WESTCOTT, FORD, *MC ELROY, CORWIN, ABBOTT, MUNRO (CHAIRMAN), BROWN, SHIPMAN, MYERS, WERTENBAKER, C. R. HALL, *W. P. HALL, CHALFANT ROBINSON, AND FRITTS; DR. FOX.

201, 202. Mediaeval History; 400 A.D.—1494 A.D. Sophomore elective, both terms, 3 hours a week. One lecture weekly by Professor Munro, and two recitations weekly in small divisions, the recitations being conducted by Professors C. R. Hall and Robinson.

301. European History from the eighteenth century to the revolutions of 1830. Lectures and required reading. Junior course, first term, 3 hours a week. Lecturer, Professor Shipman; Preceptors, Professors Shipman, Wertenbaker and Fritts, and Dr. Fox.

302. European History from the revolutions of 1830 to the twentieth century. Lectures and required reading. Junior course, second term, 3 hours a week. Lecturer, Professor Wertenbaker; Preceptors, Professors Shipman, Wertenbaker and Fritts, and Dr. Fox.

303. Constitutional Government. The genesis, nature, and operation of constitutional government, with especial reference to the political institutions of England, France, Switzerland, Germany, and the United States. W. Wilson: *Constitutional Government;* Ogg: *The*

* Absent.

Governments of Europe; Low: *The Governance of England;* Dicey: *The Law of the Constitution.* Junior course, first term, 3 hours a week. Lecturer, Professor Myers; Preceptors, Professors Myers and Fritts, and Dr. Fox.

304. Elements of Jurisprudence. Outlines of jurisprudence. An exposition of jurisprudence as an organic whole, exhibiting the nature of its subject-matter, its relationship to cognate branches of study, the interrelationship of its several parts to each other, and their proper function and aim. Lectures and collateral reading. Holland: *Elements of Jurisprudence;* Maine: *Ancient Law;* Jenks: *Law and Politics in the Middle Ages;* and other reading. Junior course, second term, 3 hours a week. Lecturer, Professor Myers; Preceptors, Professors Myers and Fritts, and Dr. Fox.

305. Greek History. (Classics 305.) Two lectures will be given each week on Greek History, from the earliest times to the Roman conquest. The third hour will be devoted to preceptorial conferences on reading, in English books, on special topics such as the Methods of Historical Investigation, Historical Criticism, the Value of the Ancient Tradition, Other Sources of Historical Knowledge, etc. A reading knowledge of Greek and Latin will not be required. Junior course, first term, 3 hours a week. Professor Prentice.

306. Roman History to 400 A.D. (Classics 306.) Special attention will be given to the study of Roman imperialism and the main governmental, economic, social, and religious developments in the Republic and the Empire. A reading knowledge of Greek and Latin will not be required. Lectures, class reports, and conferences. Junior course, second term, 3 hours a week. Professor A. C. Johnson.

*401. Constitutional History of England. A study of the formation and growth of English institutions to the close of the Middle Ages. Lectures and collateral reading. Senior course, first term, 3 hours a week. Professor Munro.

*402. Constitutional History of England since the close of the Middle Ages. Lectures and collateral reading. Senior course, second term, 3 hours a week. Professor Shipman.

*403. American History from the American Revolution to 1840. The establishment and growth of the United States. Lectures, extensive collateral reading, and written reports. Senior course, first term, 3 hours a week. [Open to juniors in 1917-1918, but will not count as a junior departmental course.] Lecturer, Professor Wertenbaker; Preceptors, Professors Wertenbaker and C. K. Hall.

*404. American History since 1840. Lectures, extensive collateral reading, and written reports. Senior course, second term, 3 hours a week. [Open to Juniors in 1917-1918, but will not count as a junior departmental course.] Lecturer, Professor C. R. Hall; Preceptors, Professors Wertenbaker and C. R. Hall.

*405. Politics. Municipal Government in the United States and other countries. Senior course, first term, 3 hours a week. Lecturer, Professor Ford; Preceptor, Professor Fritts.

*406. Politics. Federal and State Government. An examination of the way in which public policy is formulated and the public business is carried on in the United States, tracing the divergence from English procedure and comparing existing methods with those of other self-governing countries. Lectures and col-

* Also listed as a graduate course.

lateral reading. Senior course, second term, 3 hours a week. Lecturer, Professor Ford; Preceptor, Professor Fritts.

*407, 408. International Law and Diplomacy. A discussion of the principles of International law as deduced from leading cases and as applied to current diplomatic events. Scott: *Cases on International Law;* Wilson and Tucker: *International Law.* Senior course, 3 hours a week throughout the year. [First term only, 1917-1918.] Lecturer and Preceptor, Professor Brown.

*409. Politics. Constitutional Interpretation and Administrative Law. A study of the development of the leading doctrines in these fields, principally by judicial decision. The establishment of the power of the courts in review of legislation, the police power of the States, the Fourteenth Amendment, and the Common Clause as a limitation on State power are the principal topics studied. Senior course, first term, 3 hours a week. Lecturer and Preceptor, Professor Corwin.

*410. Politics. Constitutional Interpretation and Administrative Law. A continuation of the above course, which however may be taken separately. The powers of the National Government in war and peace and the legal responsibility of administrative officers are the principal topics. Senior course, second term, 3 hours a week. Lecturer and Preceptor, Professor Corwin.

*421, 422. (Classics 421, 422) Roman Law. The History and Institutes of Roman Law. Sohm: *Institutes of Roman Law,* English translation. Leage: *Roman Private Law.* Special attention will be given to the law of obligations. Students in the Department of Classics, and others who desire to do so, will read the

* Also listed as a graduate course.

Institutes of Gaius and of Justinian in Latin. Senior course, both terms, 3 hours a week. Professor Westcott.

FINAL SPECIAL HONORS

Juniors and seniors in the Department of History and Politics may become candidates for Special Honors in accordance with the general regulations for Final Special Honors. The special regulations are as follows:

1. Candidates for Final Special Honors shall take:

(a) Two courses in the Department, together with Economics 305, 306, in junior year, doing the regular preceptorial and classroom work and passing all tests and examinations given in those three courses.

(b) Two of the senior courses offered by the Department, doing the regular preceptorial and classroom work and passing all tests and all examinations, except the final regular examination in the two courses of senior year in which they are pursuing Honors work. In place of this regular examination candidates for Final Special Honors shall take an Honors examination covering the entire period of their Honors studies.

2. In place of the fifth course required of students not in candidacy for Honors, candidates for Final Special Honors will be required to do more extensive and advanced work in the courses which they may select. The Honors work will consist of supplementary reading and additional exercises and reports.

A statement of Honors reading will be issued.

For graduate courses in History and Politics, see under the Graduate School.

III. DEPARTMENT OF ECONOMICS AND SOCIAL INSTITUTIONS

PROFESSORS FETTER (CHAIRMAN), KEMMERER, *MC CLELLAN, *ADRIANCE, *MC CABE, *KNAUTH, *BAUER, AND CAROTHERS; *DR. YOUNG.

305, 306. Elements of Economics. The fundamental theories of economics and some of their more important applications and exemplifications, such as money, banking, transportation, international trade, and monopoly problems. One lecture a week and two recitations in small groups to test the student's apprehension of the subject-matter covered in the reading. Fetter: *Economic Principles* (first term), and *Economic Problems* (second term). Junior course, both terms, 3 hours a week. Prerequisite to Economics 409, 410, 411, 414. Professors Fetter and Carothers.

307, 308. Historical and Descriptive Economics. A study of the main lines of English and American industrial development. Especial attention to critical periods which best illustrate economic principles; with a description of some important conditions of industry in the present day and more detailed study of some practical problems. Junior course, both terms, 3 hours a week. Open only to departmental students. Professor McCabe. [Not given, 1917-1918.]

309. Elements of Accounting. The fundamental theory of debits and credits. Lectures and laboratory work in the special problems arising in different types of business. Junior course, first term, 3 hours a week. Economics 305 must precede or accompany this course. Professor Bauer. [Not given, 1917-1918.]

312. Statistical Methods. The theory and methods of statistics with special attention to the analysis and pre-

* Absent.

sentation of the data in the fields of the economic and social sciences. Lectures and laboratory exercises. Junior course, second term, 3 hours a week. Courses 305 and 306 must precede or accompany this course. Professor Adriance. [Not given, 1917-1918.]

*409. Money and Banking. The fundamental principles of money, credit, and banking, and their exemplification in modern currency and banking history, particularly that of the United States. Considerable attention is given to present day conditions and problems. Lectures and weekly conferences. Kemmerer: *Money and Prices;* Phillips: *Readings;* Dunbar: *The Theory and History of Banking;* Escher: *Elements of Foreign Exchange;* White: *Money and Banking.* Senior course, first term, 3 hours a week. Prerequisite courses: Economics 305 and 306. Professor Kemmerer.

*410. Public Finance. The leading principles of public finance, and some of their practical applications in modern history, particularly that of the United States. The course is devoted largely to the subject of taxation, and considerable attention is given to present day problems. Seligman: *Essays in Taxation;* Bullock: *Selected Readings in Public Finance;* and collateral readings, especially readings in the *Reports of the National Conferences on State and Local Taxation,* and in selected reports of State tax commissions. Senior course, second term, 3 hours a week. Prerequisite courses: Economics 305, 306. Professor Kemmerer.

411. European Economic Policy in the Nineteenth Century. An account of some of the important political events in Europe since 1815, in connection with social condi-

* Also listed, with additional work, as a graduate course.

tions and industrial changes. Senior course, first term, 3 hours a week. Prerequisite courses: Economics 305, 306. Professor McClellan. [Not given, 1917-1918.]

414. Social Economics. A study of the principles and methods now being applied in the prevention and treatment of crime and dependency, and in bettering physical and moral conditions of industrial life. Lectures, with collateral readings, visits to industrial and philanthropic institutions in the vicinity, and reports and conferences on assigned problems. Senior course [to be taken also by departmental juniors, 1917-1918], first term, 3 hours a week. Prerequisite courses: Economics 305, 306. Professor Fetter (lecturer), and Professor Carothers.

415. Corporation Finance. A study of corporations with reference to their organization, their financial management, and their relations to investors. Lectures and laboratory exercises. Senior course, first term, 3 hours a week. [To be taken also by departmental juniors, 1917-1918.] Professor Carothers.

418. Principles of Accounting. A continuation of course 309, leading to the preparation and analysis of private and public financial statements, and to the practice of cost finding, inventories, allowance for depreciation, and to the determination of rates in public utilities. Lectures and laboratory exercises. Senior course, second term, 3 hours a week. Professor Bauer. [Not given, 1917-1918.]

FINAL SPECIAL HONORS

Candidates for Final Special Honors in this Department shall have attained second general group at the end of sophomore year, or third general group with second group in Sophomore History.

* Also listed, with additional work, as a graduate course.

Applications from other students who have done good work in Mathematics, History, and Philosophy in their freshman and sophomore years will be considered by the Department.

Two courses required in the Department throughout the junior and senior years.

The reading of a selected group of texts to supplement the regular courses is required of honors students.

A written report on some economic problem is required each term.

A comprehensive examination is given in the Honors Course at the end of the senior year.

For graduate courses in Economics and Social Institutions, see under the Graduate School.

IV. DEPARTMENT OF ART AND ARCHAEOLOGY

PROFESSORS MARQUAND (CHAIRMAN), BUTLER, *MATHER, MOREY, AND *ELDERKIN; DR. *SMITH, MR. *MORGAN, MR. PARK, AND MR. FRIEND.

301. Ancient Art. A general outline of the history of ancient sculpture, painting and the minor arts. Lectures and required reading. In this course the preceptorial reading consists of Maspero: **Art in Egypt;* Babelon: **Manual of Oriental Antiquities;* Fowler and Wheeler: **Greek Archaeology;* Perrot and Chipiez: *Histoire de l'Art dans l'antiquité,* vols. VI-IX. [Books marked with an asterisk are used by all students of the course, whether candidates for Final Special Honors or not.] A thesis is required of candidates for Final Special Honors on one of the following subjects: Minoan and Mycenaean Painting; Minoan and Mycenaean Metal Work; Vase Paintings

---

* Absent.

with Scenes from Epic Story; The Work of Praxiteles; Types of Greek Coins; Comparative Study of Greek and Roman Portraits. Junior course, first term, 3 hours a week. Lecturer, Professor Elderkin; Preceptors, Professors Elderkin and Morey.

302. Mediaeval Art. A general outline of the history of Early Christian, Byzantine, Romanesque, and Gothic sculpture, painting, and the minor arts. Lectures and required reading. In this course the preceptorial reading consists of: Lowrie: **Monuments of the Early Church;* Herbert: **Illuminated Manuscripts;* Marriage: **Sculptures of Chartres Cathedral;* Mâle: *Religious Art in France in the Thirteenth Century;* Michel: *Histoire de l'Art chrétien;* Gonse: *l'Art gothique;* Taylor: *The Mediaeval Mind.* [Books marked with an asterisk are used by all students of the course.] A thesis is required of candidates for Final Special Honors on one of the following subjects: The Use of the Apocryphal Gospels in Early Christian Art; The Mosaics of Rome and Ravenna; The Romanesque Style in Illuminated Manuscripts; Ecclesiastical Symbolism in the Thirteenth Century; The Crucifixion in Mediaeval Art; Mediaeval Monuments in the Princeton Art Museum; Mediaeval Monuments in the Metropolitan Museum. Junior course, second term, 3 hours a week. Lecturer and Preceptor, Professor Morey.

303. Ancient Architecture. A course in the history of Egyptian, Assyrian, Persian, Greek, and Roman architecture. Two hours of lectures and one of historical drawing and reading. In this course the preceptorial reading consists of Statham: **A Short Critical History of Architecture;* Sturgis: **History of Architecture,* vol. I; Anderson and Spiers: **Architecture of*

Greece and Rome; Simpson: *History of Architectural Development* (vol. I, chaps. I-VII); Choisy: *Histoire de l'Architecture,* (vol. I); Benoit: *l'Architecture: Antiquité;* or Borrmann and Neuwirth: *Geschichte der Baukunst,* I. [Books marked with an asterisk are used by all students of the course. Extra reading is required of candidates for Final Special Honors.] Junior course, first term, 3 hours a week. Prerequisite to 407, 408. Elements of Architecture. Lecturer, Professor Butler; Preceptors, Professor Butler and Mr. Park.

304. Mediaeval Architecture. The history of Early Christian, Byzantine, Romanesque and Gothic architecture. Two hours of lectures and one of historical drawing and reading. In this course the preceptorial reading consists of: Porter: **Mediaeval Architecture;* Moore: **Gothic Architecture;* Simpson: *History of Architectural Development;* Bond: *Gothic Architecture in England; English Church Architecture;* Choisy: *Histoire de l'Architecture,* vol. II; Lasteyrie: *l'Architecture Romane;* or Borrmann and Neuwirth: *Geschichte der Baukunst.* II. [Books marked with an asterisk are used by all students of the course. Extra reading is required of candidates for Final Special Honors.] Junior course, second term, 3 hours a week. Prerequisite course: 303. Ancient Architecture. Lecturer, Professor Butler. Preceptors, Professor Butler and Mr. Park.

305, 306. Architectural Drawing. A course in shades and shadows and perspective given from the architectural point of view, and offered especially to students intending to prepare for the future study and practice of architecture as a profession. All the common architectural elements are considered, with their shadows,

in plan elevation and section; and in the second term particular attention is paid to perspective and to the drawing of the Classic Orders. Junior course, both terms, two hours of lectures and one of instruction in drawing each week. Prerequisite to 409, 410. Allied Elements. Lecturer and instructor in drawing, Mr. Park.

*401. Renaissance and Modern Sculpture. A general treatment of sculpture from the end of the Middle Ages to modern times. Lectures and preceptorial reading, selected from such works as: Wölfflin: *The Art of the Italian Renaissance;* Marcel Reymond: *La Sculpture Florentine;* Gonse: *La Sculpture française;* Lady Dilke: *French Architects and Sculptors of the Eighteenth Century;* and from monographs devoted to special sculptors. Candidates for Final Special Honors will be required to write a thesis on some such topic as the following: 1. The Evolution of the Italian Tomb; 2. The Equestrian Statue in the Italian and French Renaissance; 3. The School of Troyes; 4. The Life and Work of Bernini: 5. The Sculptors of Versailles; 6. French Influence on American Sculpture. Senior course, first term, 3 hours a week. Prerequisite: one of the junior courses in Art and Archaeology. Lecturer and Preceptor, Professor Morey.

*402. Greek Sculpture. A study of the technique, forms, composition and history of Greek sculpture. Lectures and required reading. Preceptorial reading will be selected from Gardner: *Handbook of Greek Sculpture;* Collignon: *Histoire de la Sculpture Grecque;* Joubin: *La Sculpture Grecque;* and from more special monographs. Candidates for Final Special Honors will be required to write a thesis on some such topic as: 1. Grave Stelae and Literary Epitaphs; 2. Significance

* Also listed as a graduate course.

of Decorative Sculpture; 3. The Female Figure in Free Sculpture; 4. The Ludovisi Throne. Senior course, second term, 3 hours a week. Prerequisite course, Ancient Art 301. Lecturer and Preceptor, Professor Morey.

*405. The Revival of Painting in Italy. An outline history of painting in Italy from Cavallini to Michelangelo, with especial regard to the Florentine School. Lectures and required reading. Preceptorial reading: Brown and Rankin: *A Short History of Italian Painting;* selections from general and special treatises. Candidates for Final Special Honors will be assigned extra reading and are expected to prepare a thesis, of which the following are given as typical examples: 1. St. Jerome and St. Augustine in Fifteenth Century Painting; 2. The Annunciation in the Florentine and Sienese School; 3. Herod's Feast in Italian Painting; 4. The School of Ferrara; 5. Umbrian Painting from 1450 to the Death of Perugino; 6. Three Sienese Painters of the Early Renaissance, Sassetta, Matteo di Giovanni, Francesco di Giorgio; 7. Raphael's Origins and Early Work to the Year 1507; 8. An Interpretation of the Mythological Paintings of Titian; 9. The Work of Piero della Francesca; 10. Masaccio; 11. The Dante Illustrations of Botticelli. Senior course, first term, 3 hours a week. Prerequisite course: one of the junior courses in Art and Archaeology. Lecturer and preceptor, Professor Morey.

*406. Northern Painting. Especial attention will be given to the Flemish School, but the chief painters of the Dutch School will be studied, and a few lectures on typical French and English masters of the nineteenth century will treat the leading modern tendencies in the

* Also listed as a graduate course.

light of their historic origins. Lectures and required reading. Preceptorial reading, from general and special treatises. Extra reading required of candidates for Final Special Honors, who will also be assigned topics for theses similar to those required in course 405. Senior course, second term, 3 hours a week. Prerequisite course: one of the junior courses in Art and Archaeology. Lecturer and Preceptor, Mr. Friend.

*407, 408. Classical Architecture. A detailed study of the architecture of the Greeks and Romans in its historical development in antiquity and during the Classical Revival, based chiefly upon the publications of the ancient monuments. The second term is devoted to the history of Renaissance and New Classic architecture. Lectures and preceptorial reading. Preceptorial reading: first term, Anderson and Spiers: *Architecture of Greece and Rome;* Marquand: *Greek Architecture;* second term, Anderson: *Renaissance Architecture in Italy;* Ward: *French Renaissance Architecture;* Moore: *Character of Renaissance Architecture.* Candidates for Final Special Honors are required to present a thesis which shall show familiarity with the special monographs on important architectural sites and particular monuments. Senior course, both terms, 3 hours a week. Prerequisite course, Ancient Architecture 303. Lecturer and Preceptor, Professor Butler.

409, 410. Allied Elements. The application of Classic architectural principles to the solution of problems in design suitable for beginners: (1) the study of the technique of rendering and indication; (2) major problems involving plans, elevations and sections, the

* Also listed as a graduate course.

casting of shadows, and rendering in monotone; (3) minor problems principally in perspective. Senior course, both terms, 3 hours a week. Prerequisite course, Architectural Drawing 305, 306. Lecturer and instructor in drawing, Mr. Park.

FINAL SPECIAL HONORS

Candidates for Final Special Honors in Art and Archaeology must in sophomore year have made a first or second general group, or if in the third general group, they must have obtained a first or second group in such courses in classics or modern languages as they may have taken. During the junior and senior years they are required to take at least two courses each term in this Department, exclusive of the courses in Architectural Drawing 305, 306, and Allied Elements 409, 410, the exclusion applying to candidates for Final Special Honors with reference to Architecture. They shall follow the regular lectures, take the regular tests and a final comprehensive examination, but shall be segregated for preceptorial reading, and in certain courses prepare a written thesis on an assigned subject.

For graduate courses in Art and Archaeology, see under the Graduate School.

B. DIVISION OF LANGUAGE AND LITERATURE

DEPARTMENT OF CLASSICS

DEAN WEST, PROFESSORS WESTCOTT, ROBBINS, PRENTICE, CAPPS, STUART, ABBOTT (CHAIRMAN), DAVID MAGIE, BASORE, HUTSON, JOHNSON, DURHAM, SCOON, DEWING, AND MR. MILLER.

FRESHMAN AND SOPHOMORE YEARS

101. Plato. The *Apology,* the *Crito,* and selections from other dialogues of Plato will be read. In addition a course of lectures on certain topics in Greek history, life, and literature will be given to the class by Professor Prentice. In connection with the lectures collateral reading in English will be required. Freshman course, required for the degree of A.B., first term, 4 hours a week. Professors Stuart, Hutson, Johnson, and Durham.

102. Greek Poetry. Selections representative of various periods of Greek poetry will be read. Freshman course, required for the degree of A.B., second term, 4 hours a week. Professors Hutson, Johnson, and Dewing.

103. Selections from the Latin historical literature, including such authors as Livy, Sallust, and Cicero. The objects of the course, to be tested by the final examination, is to develop the ability to translate at sight from Latin into English and from English into Latin. The upper divisions in the courses leading to the degrees of Litt.B. and B.S., in place of one of their four hours a week in the classroom, will attend a course of lectures by Professor Prentice on Greek history, life, and literature. One month from the opening of the term a limited number of honors groups will be se-

lected for more independent work under the preceptorial method. Freshman course, required of all candidates for the degrees of A.B., Litt.B., and B.S., first term, 4 hours a week. Professors Westcott, Magie, Scoon, Durham, Dewing, Johnson, Basore, Mr. Jones, and Mr. Miller.

104. Tacitus, Pliny, and Latin Verse. During the first half of the term divisions I, II, III, XI and XII will read selections from the *Annals* of Tacitus; other divisions will read the *Letters* of Pliny. During the second half of the term *A Selection of Latin Verse* will be taken by all divisions. Freshman course, required of all candidates for the degrees of A.B., Litt.-B., and Sc.B., second term, 4 hours a week. Professors David Magie, Westcott, Basore, Johnson, Durham, Scoon, and Dewing, Mr. Jones, Mr. Miller.

201. Greek Tragedy. Selected plays. Lectures on the development of the drama, on the presentation of plays, on the authors and their works. Sophomore course, required of candidates for the degree of A.B., first term, 3 hours a week. Professors Robbins, Capps, and Hutson.

202. The Odyssey. Selections from the Odyssey will be read, and its structure studied. Lectures and assigned readings in the history of the epic and the romance. Sophomore course, elective for candidates for the degree of A.B., second term, 3 hours a week. Professor Robbins.

203. Roman Comedy. Reading of selected plays of Plautus and Terence. Sophomore course, elective for candidates for the degree of A.B., required alternative for candidates for the degrees of Litt.B. and B.S., first term, 3 hours a week. Professors Stuart, Magie, Abbott, Basore, Scoon, and Mr. Miller.

204. Horace and Catullus. Horace: Odes and Satires;

Catullus: Selections. Sophomore course, required of candidates for the degree of A.B., required alternative for candidates for the degrees of Litt.B. and B.S., second term, 3 hours a week. Dean West, Professors Stuart, Hutson, Basore, Johnson, Durham, Scoon, Dewing and Mr. Miller.

JUNIOR AND SENIOR YEARS

317. Latin Literature of the Republic. Study of the development of the Latin language, of the national character, of the several literary forms, and of Greek influence. Assigned reading chiefly from Ennius, Plautus, Terence, Lucilius, Varro, Cicero, Sallust, and Catullus. Junior course, first term, 3 hours a week. Professor Durham.

Candidates for Honors will have additional reading in some of the authors, and collateral reading in Sellar: *Roman Poets of the Republic;* Tyrrell: *Latin Poetry,* and other books.

318. Roman Literature of the Empire. One lecture, two recitations weekly. The lectures will give a general survey of the history of Roman literature from Augustus to Marcus Aurelius. The other hours will be devoted to the study of representative works of this period, the purpose, construction and literary qualities of which will be discussed by the students. Junior course, second term, 3 hours a week. Professor Scoon.

Candidates for Honors will be required to read further portions of the works of the authors studied by the rest of the class, as well as selections from other writers of this period, and to present written reports in connection with their reading.

306. Roman History to 400 A.D. Special attention will be given to the study of Roman imperialism, and the

main governmental, economic, social, and religious developments in the Republic and the Empire. A reading knowledge of Greek and Latin will not be required. Lectures, class reports, and conferences. Junior course, second term, 3 hours a week. (May count as a course in History). Professor Johnson.

307. Roman Satire. This course will deal mainly with the Satires and the Epistles of Horace and with the Satires of Juvenal. In reading Horace his philosophy of life and the construction of his Satires will be especially studied. In the work on Juvenal the class will consider particularly the poet's attitude as a moralist and as a portrayer of Roman life under the Empire. Junior course, first term, 3 hours a week. Professor Stuart.

Candidates for Honors will be expected to read the Satires and Epistles of Horace entire and selections from Juvenal in addition to the assignment for the whole class; collateral reading in English and occasional written reports will also be required.

308. Latin Philosophical Essays. Reading and discussion of Books I, II, and V of the Tusculan Disputations of Cicero and of selected essays of Seneca. Study of the tendency of Roman philosophy and of the character and the value of Cicero's contributions to philosophical literature. Junior course, second term, 3 hours a week. Mr. Miller.

Candidates for Honors will also read part of Cicero, *De Officiis,* and Books III and IV of the Tusculan Disputations.

305. Greek History. Two lectures will be given each week on Greek History, from the earliest times to the Roman conquest. The third hour will be devoted to preceptorial conferences on reading, in English books,

on special topics such as the Methods of Historical Investigation, Historical Criticism, the Value of the Ancient Tradition, Other Sources of Historical Knowledge, etc. Junior course, first term, 3 hours a week. A reading knowledge of Greek and Latin will not be required. (May count as a course in History.) Professor Prentice.

313. Greek Comedy. Lectures on the origin and development, form and content of Greek comedy. Two plays of Aristophanes will be studied closely, and a third read rapidly. Junior course, first term, 3 hours a week. Professor Capps.

Candidates for Honors will also read the *Birds* of Aristophanes, the *Epitrepontes* of Menander, and a few of the most significant fragments of lost plays.

314. Greek Tragedy. Two plays of Aeschylus and two plays of Sophocles will be translated and interpreted in class and their literary qualities, dramatic construction, and stage-setting studied. Lectures will be given on Greek Tragedy and collateral reading assigned. Junior course, second term, 3 hours a week. Professor Robbins.

Candidates for Honors will read one additional play of each poet in the original and several in translation. Readings in Butcher, Capps, Murray, and Symonds will also be assigned.

319. Theocritus. Reading of Theocritus, Bion, and Moschus. The development of pastoral poetry in Latin and modern literature will be studied. Junior course, first term, 3 hours a week. Professor Dewing.

320. Plato. One or more short dialogues entire, with substantial portions of others: *Protagoras, Phaedo, Phaedrus, Gorgias, Republic.* Study of form, style, and philosophic content. Junior course, second term, 3 hours a week. Professor Hutson.

*401. Lucretius. Reading of selected books of the *De Rerum Natura* with regard for the philosophic and literary aspects of the poem. Two hours weekly will be devoted to translation and intensive study, one hour of preceptorial character to the discussion of the contents of larger assignments in the author. ' Required collateral reading. Senior course, first term, 3 hours a week. Professor Basore. [Not given, 1917-1918.]

Candidates for Honors will read the entire poem, will have additional collateral reading assigned to them, and will present written reports from time to time.

402. Roman Elegiac Poets. Lectures on the history of the elegy; reading of selections from Tibullus, Propertius, and from the *Amores* of Ovid. Senior course, second term, 3 hours a week. Professor Stuart.

Candidates for Honors will read the Corpus Tibullianum, Propertius, and the *Amores* of Ovid entire; also selections from the Greek writers of elegy and from the *Heroides* of Ovid. Collateral reading and written reports will be required.

*413. Tacitus. Reading of the Histories entire, with special attention to the author's style as a writer, and his aims, methods, and sources as a historian. Senior course, first term, 3 hours a week. Professor Westcott. [Not given, 1917-1918.]

Candidates for Honors will also read the last six lives of the Caesars by Suetonius, Plutarch's *Galba* and *Otho,* Pliny's *Letters to Tacitus,* and Henderson's *Civil War and Rebellion in the Roman Empire.*

414. Cicero's Political Writings. Study of Cicero's *De Republica* and *De Legibus,* together with some of his speeches and letters which best illustrate his political theories and practice. Assignments for collateral reading in books dealing with Cicero's life and with

* Also listed as a graduate course.

Roman public law and religion. Senior course, second term, 3 hours a week. Professor David Magie.

Candidates for Honors will also be required to read additional speeches having political significance, as well as portions of Polybius, Book VI, and other works which present parallels to Cicero's political treatises, and, in connection with the *De Legibus,* the fragments of the *Twelve Tables* and the text of the most important laws. Written reports in connection with the reading will also be required.

415. Greek Lyric Poets. A survey of Greek lyric poetry from the seventh century to the third century, with extensive reading in the elegiac, iambic, and melic poets. Senior course, first term, 3 hours a week. Professor Robbins.

Candidates for Honors who elect this course will read about 1000 lines in Pindar and Bacchylides in addition to the work assigned to the others and will prepare a special report upon some selected author or subject.

*416. Aristotle. Books, I, II, III, V, and X of the Nicomachean Ethics will be read. This work will be supplemented by lectures on Aristotle's place in the history of ethical thought and by a limited amount of collateral reading. Senior course, second term, 3 hours a week. [Not given, 1917-1918.]

Candidates for Honors will read Books I-VII, and X, and will be required to complete an extended programme of collateral reading.

*†416 a. Thucydides (alternative to Aristotle 416). Books I-II of Thucydides' history will be read. Discussion will be devoted to such questions as the place of

---

* Also listed as a graduate course.
† Thucydides will be given in place of Aristotle only if elected by a sufficient number.

Thucydides in Greek Historiography, his authenticity, his sources, and his style. Collateral reading will be assigned to the members of the class. Senior course, second term, 3 hours a week. [Not given, 1917-1918.]

Candidates for Honors will also read Books III and IV of Thucydides and will have additional collateral reading assigned to them.

419. Greek Epic Poetry. The *Iliad* will be read in class, two hours each week, the entire *Iliad* being studied. The third hour will be given to lectures and conferences on the Origin and Development of the Greek Epics, the History of the Text, Homeric Antiquities, and Historical Problems connected with these poems. Collateral reading on special topics will be assigned, and reports made on these topics. Senior course, first term, 3 hours a week. Professor Prentice. [Not given, 1917-1918.]

420. Virgil. A study of the literary methods and poetic art of Virgil; reading and discussion of selected portions of his works; occasional lectures. Senior course, second term, 3 hours a week. Professor David Magie.

*421, 422. Roman Law. The History and Institutes of Roman Law. Sohm: *Institutes of Roman Law,* English translation; Leage: *Roman Private Law.* Special attention will be given to the law of Obligations. Students in the Department of Classics, and others who desire to do so, will read the Institutes of Gaius and of Justinian in Latin. Senior course, both terms, 3 hours a week. Professor Westcott.

423. The Influence of the Classics in English Literature. The quality of English literature as variously determined by the influence of the classics; the spirit of the

* Also listed as a graduate course.

classics as manifest in the form and the content of English literature. Readings in Aeschylus, Plato, Aristotle, Theocritus, Bion, Moschus, Horace, Martial; Spenser, Milton, Herrick, Pope, Shelley, Wordsworth, Keats, Tennyson, Swinburne. Senior course, first term, 3 hours a week. Professor Osgood.

Honors readings, besides an extension of the readings in Plato, Spenser, Milton, and Swinburne, will include selections from Sophocles, Lucretius, Virgil, Mantuan, Dryden, Thomson, Landor, and assignments from the following works: Gordon: *English Literature and the Classics;* Livingstone: *The Greek Genius and its Meaning to Us;* Croiset: *Histoire de la Littérature Grecque,* vol. 1; Osgood: *The Classical Mythology in Milton;* Norlin: *Conventions of the Pastoral Elegy;* Jebb: *Life of Bentley;* Mustard: *Classical Echoes in Tennyson.*

All junior and senior courses offered by the Department of Classics are open alike to candidates for Final Special Honors, to students enrolled under the general plan of study who elect the Department, and to qualified students in other departments.

Students not candidates for Final Special Honors in Classics are not required to do the supplementary reading announced in connection with any of the courses described on the foregoing pages.

FINAL SPECIAL HONORS

Candidates for Final Special Honors in Classics must choose the two departmental courses required of them each term from the following list*:

* For the year 1917-1918 seniors may elect junior courses, and qualified juniors may elect senior courses, in making up their quota of departmental courses.

JUNIOR COURSES

First Term: Latin Literature 317, Roman Satire 307, Greek Comedy 313.

Second Term: Roman Literature 318, Latin Philosophical Essays 308, Greek Tragedy 314.

SENIOR COURSES

First Term: Lucretius 401, Tacitus 413, Greek Lyric Poets 415, Classical Influences 423.

Second Term: Roman Elegiac Poets 402, Cicero's Political Writings 414, Aristotle 416 (Thucydides 416a†).

Candidates for Final Special Honors in Classics are further required to do additional reading, both *special* and *general*. A definite assignment of special reading is to be completed each term in connection with one or the other (not both) of the two courses selected from the preceding list. A brief account of the scope of the special reading is appended to the description of these courses. A detailed statement of it may be had from either Professor Robbins, Professor Basore, or Professor Hutson, with whom those who think of becoming candidates for Final Special Honors are advised to consult. The special reading is to be followed by the candidate under the supervision of the instructor giving the course, and the candidate's knowledge of the books assigned will be tested in a special examination at the end of that course.

A definite assignment of general reading is also to be completed before the close of the junior year. The candidate's progress will be informally tested from time to time, and at the end of his junior year his mastery of the books assigned will be tested by a final examination upon them. The prescribed general reading is as follows: (1) the *Iliad* of Homer; (2) the *Aeneid* of Virgil; (3) the history of Greek and Latin Literature.

In the assignment of Final Special Honors, consideration

† Thucydides will be given in place of Aristotle only if elected by a sufficient number.

will be given to the standing of the candidate in the eight departmental courses elected, in the examinations on the special reading pursued in connection with four of these courses, and in the examination on the general reading.

In addition to the courses listed above, the Department offers the following courses, which are open to all qualified students. However, these courses may be taken by candidates for Final Special Honors in Classics only as free electives:

JUNIOR COURSES

First Term: Theocritus 319, Greek History 305.
Second Term: Plato 320, Roman History 306.

SENIOR COURSES

First Term: Greek Epic Poetry 419, Roman Law 421.
Second Term: Virgil 420, Roman Law 422.

For graduate courses in Classics, see under the Graduate School.

VI. DEPARTMENT OF ENGLISH

PROFESSORS HUNT (CHAIRMAN), *HENRY VAN DYKE, HARPER, PARROTT, COVINGTON, SPAETH, OSGOOD, NOYES, GEROULD, ROOT, GRIFFIN, *MACDONALD, CROLL, MILES, *KENNEDY, *HEERMANCE, AND MURCH.

101, 102 *a*. Selected English authors, for special study and for general reading. The principles of composition and rhetoric will be derived therefrom. Frequent reports on assigned reading. Freshman required course, both terms, 2 hours a week for A.B., Litt.B., and B.S., freshmen. Professor Root; Preceptors, Professors Harper, Parrott, Osgood, Gerould, Root, Croll, Griffin, Murch.

101, 102 *b*. Public Speaking and Debate. Offered to

* Absent.

freshmen who enter the Cliosophic or the American Whig Society as a substitute for 101, 102 *a*. Freshman course, both terms, 2 hours a week for A.B., Litt.B., and B.S. freshmen. Professor Covington.

101, 102 *c*. English. Two hours a week will be given to the special study and general reading of selected English authors, with frequent reports on assigned reading; the third hour to rhetoric and composition, with special attention to technical writing. Required of C.E. freshmen, both terms, 3 hours a week. Professor Murch.

201, 202. Outline Sketch of English Literature. A survey of English literature from earliest times to the Victorian Age. Occasional lectures; oral and written recitations; reports on assigned reading. The reading in this course is designed to illustrate the various periods in the history of English literature. Sophomore elective, both terms, 3 hours a week. Lectures, Professor Spaeth; Preceptors, Professors Spaeth, Osgood, Gerould, Griffin, Murch.

301. English Literature: The Renaissance. The revival of learning, the Reformation, the national awakening under the Tudors, and the influence of Italy, in their effect upon English letters. Spenser, Sidney, and Marlowe will be studied. Attention will be paid to the history of the drama and of lyric poetry, and to the narrative of Elizabethan voyagers. Junior course, first term, 3 hours a week. Lecturer, Professor Harper; Preceptors, Professors Harper, Parrott, Osgood, Croll.

302. English Literature: Shakespeare. A study of some of Shakespeare's representative plays. Reference books: Dowden: *Shakespeare, His Mind and Art;*

Boas: *Shakespeare and His Predecessors.* Junior course, second term, 3 hours a week. Lecturer, Professor Parrott; Preceptors, Professors Harper, Parrott, Root, Croll.

303. Chaucer and his Contemporaries. Lectures on Chaucer, his period, his language, and his contemporaries. The reading will include the greater part of Chaucer's poetry, together with selections from Langland, Gower, Wyclif, and the author of *Sir Gawaine and the Green Knight.* A thesis of considerable length, embodying the results of independent investigation, conducted under the guidance of the preceptors, will be required of every student. One hour a week will be devoted to lectures and two hours a week to preceptorial conferences. Skeat: *Student's Chaucer;* Skeat: *Piers, the Plowman.* A handbook dealing with the period will also be used. Junior course, first term, 3 hours a week. Lecturer, Professor Gerould; Preceptors, Professors Gerould, Griffin, Osgood.

304. History of the English Language. Lectures on the general principles of linguistic development, and on the history, vocabulary, and structure of the English language. Junior course, second term, 3 hours a week. Lecturer, Professor Griffin.

*401. Eighteenth Century Literature. A study of leading poets and prose writers from Dryden to Burns. Senior course, first term, 3 hours a week. Professor Root.

402. Seventeenth Century Literature. Lectures on the poets and prose writers during the age of Milton. The assigned reading will include the larger part of Milton's poetry, his *Areopagitica,* his *Letter on Education,* Browne's *Religio Medici,* Walton's *Compleat*

* Also listed as a graduate course.

Angler, and selections from the Cavalier poets. Senior course, second term, 3 hours a week. Professor Osgood.

*403. English Romanticism. A literary study of the chief writers of the early part of the Nineteenth Century. Senior course, first term, 3 hours a week. Lecturer, Professor Spaeth; Preceptors, Professors Spaeth, Osgood, Murch.

*404. English Literature of the Victorian Period. A study of some of the leading British and American writers of the Victorian period. Senior course, second term, 3 hours a week. Lecturer, Professor Noyes; Preceptors, Professors Noyes, Osgood, Gerould, Murch.

*405. Elementary Old English. A grammatical and phonological study of Old English, with readings mainly from Old English prose literature. Smith: *Old English Grammar;* Bright: *Anglo-Saxon Reader.* Senior course, first term, 3 hours a week. Prerequisite to English 406. Professor Hunt.

*406. Advanced Old English. Selections, mainly poetical, from Old English literature will be read, under direction of the professor in charge and the preceptors, two hours a week. One hour a week will be devoted to lectures by the professor in charge on historical and critical topics. Bright's *Anglo-Saxon Reader* and Wyatt's *Beowulf* will be the basis for selections. A thesis will be required. Senior course, second term, 3 hours a week. Prerequisite course: English 405. Professor Hunt.

407, 408. Advanced Composition. This course is intended for those who desire special training in English composition. It is open both to departmental students, and to those who have not elected the department,

* Also listed as a graduate course.

but only those will be admitted who, in the opinion of their instructors in English during the first three years, are likely to profit by it, and are qualified to do the work. The course will be conducted in groups, and the individual student will be expected to practise composition in the particular form best suited to his powers and needs. Such forms may include the Essay, Argument, Narrative, Dramatic Writing, and Verse. Senior course, both terms, 3 hours a week. Professors Gerould and Croll.

409. (Classics 423). The Influence of the Classics in English Literature. The quality of English literature as variously determined by the influence of the classics; the spirit of the classics as manifest in the form and the content of English literature. Reading in Aeschylus, Plato, Aristotle, Theocritus, Bion, Moschus, Horace, Martial; Spenser, Milton, Herrick, Pope, Shelley, Wordsworth, Keats, Tennyson, Swinburne. Senior course, first term, 3 hours a week. Professor Osgood.

410. Poetics. A study of the theory of poetry in Aristotle and other representatives of ancient opinion, and in certain representatives of modern thought. The nature of the greater forms of poetic art, epic, dramatic, and lyric, and the conditions under which each develops. Senior course, second term, 3 hours a week. Professor Croll.

FINAL SPECIAL HONORS

Juniors and seniors in the Department of English may become candidates for Final Special Honors, in accordance with the general regulations for Final Special Honors. The special regulations are as follows:

A candidate for Final Special Honors in English must take the following courses:

Junior Year

First term: 301. English Literature of the Renaissance
303. Chaucer and his Contemporaries
Second term: 302. Shakespeare
304. History of the English Language.

Senior Year

First term: Two courses, one of which must be chosen from courses 405, 407, 409.
Second term: Two courses, one of which must be chosen from courses 406, 408, 410.

Each candidate shall adopt a consistent, definite, and properly limited plan of study beyond the scope of his course.

At the end of senior year each candidate shall pass an examination based upon all his work in English during junior and senior years.

Each candidate shall follow a prescribed course of reading in extension of the work of each course. At the final comprehensive examination the candidate must present a general knowledge of English history and of the history of the English language and literature.

The special work for Honors shall be chiefly either in literature or in linguistics, as follows:

LITERATURE

A candidate wishing to specialize in Literature shall select for intensive study during junior and senior years one of the following topics:

1. Old English Literature
2. Middle English Literature
3. English Literature of the Renaissance
4. A Single Period of English Literature since 1642
5. English Literature and Political History
6. English Literature and Philosophy
7. English Literature and French, or German, or Italian Literature

8. English Literature and the Classics
9. Theories of Poetry and Fine Art
10. The Development of a Single Literary Form

Note on Topics 1-4. In connection with any of these topics the candidates shall follow a course of reading illustrating the English philosophy and history of the period, and the origins of its main tendencies.

Note on Topics 5-8. As these topics present English literature particularly in its relation to other subjects, a candidate's choice will usually relate itself to his choice of courses outside of the Department.

Note on Topic 7. As the relations of English literature to these others vary in importance from period to period, the candidate may include more than one of them in his plan, or may confine himself to a more intensive study of one of them in a particularly significant period; such as, for example, English Literature and French Literature in the Eighteenth Century; English Literature and Italian Literature in the Sixteenth Century.

LINGUISTICS

A candidate wishing to specialize in Linguistics shall read selected books on the phenomena of language, on the relation of English to kindred languages, and on the elements of style.

His intensive study shall have as its subject the relation of English to one other language, or the language and style of some selected author.

The candidate shall from time to time in each term report progress in his special reading to his preceptor, and shall do such writing in connection with it as his preceptor shall prescribe.

A statement of Honors reading will be issued.

For graduate courses in English, see under the Graduate School.

VII. DEPARTMENT OF MODERN LANGUAGES

PROFESSORS VREELAND, GAUSS (CHAIRMAN), BUFFUM, COLLINS, HOSKINS, BLAU, PRIEST, MARDEN, ARMSTRONG, CRITCHLOW, KOREN, *THAYER, STUART, AND BENDER; MR. *CHAPMAN, MR. *MC CONNELL, DR. *WALLACE AND DR. *STEVENS.

GERMANIC SECTION

101, 102. Beginners' German. Grammar, reading, and composition. Freshman course, both terms, 3 hours a week. Professor Hoskins.

103, 104. Freshman German. Reading of short stories and descriptive prose, with exercises in syntax and composition. Freshman course, both terms, 3 hours a week. Prerequisite course: Entrance German A. Prerequisite to German 203, 204. Professors Bender, Hoskins, and Blau.

105, 106. Advanced German for Freshmen. Reading of historical, descriptive, and narrative prose, with exercises in composition. Texts are selected to form a general introduction to the study of modern German life and letters. Open to freshmen who have entered on German B. Both terms, 3 hours a week. Either German 105, 106 or 203, 204 is prerequisite to the German courses of junior and senior years. Professors Bender and Priest.

201, 202. Beginners' German. Grammar, reading, and composition. Sophomore elective course, both terms, 3 hours a week. Professor Hoskins.

203, 204. Sophomore German. An introduction to German literature of the eighteenth and nineteenth centuries. Reading of selected works; collateral reading. Sophomore elective course, both terms, 3 hours a week. Prerequisite course: German 103, 104 or

* Absent.

Entrance German B. Either German 203, 204 or 105, 106 is prerequisite to the German course of junior and senior years. Professors Priest and Blau.

301, 302. German Literature from Opitz to Schiller. First term: selected works of Lessing will be read and interpreted in the class; collateral reading in both German and English. Second term: selected works of Schiller; collateral reading in both German and English; lectures on German literature from Lessing's death to Schiller's death. Junior course, both terms, 3 hours a week. Prerequisite course: German 105, 106 or 203, 204. Professors Priest and Hoskins.

303, 304. Goethe's Life and Works. Lectures and reading. *Götz von Berlichingen, Werthers Leiden, Iphigenie, Tasso, Hermann und Dorothea, Faust, Gedichte, Dichtung und Wahrheit,* with collateral reading. Reference books: English and German works on Goethe's life and on *Faust.* Junior course, both terms, 3 hours a week. Prerequisite course: German 105, 106 or 203, 204. Professor Blau.

401, 402. The Romantic School in Germany and German Literature since Goethe's death. This course comprises the reading of selected works, lectures, and collateral reading. Senior course, both terms, 3 hours a week. Prerequisite course: German 105, 106 or 203, 204. Professor Hoskins.

403, 404. Middle High German. Elements of Middle High German grammar. Readings in mediaeval German epic poetry in the first term, and in the epic and lyric poetry of the same period in the second term. Senior course, both terms, 3 hours a week. Prerequisite course: German 105, 106 or 203, 204. Professors Hoskins and Priest.

Romanic Section

101, 102. Beginners' French. Grammar, composition, and reading. Freshman course, both terms, 3 hours a week. Professor Koren and Dr. van den Ven.

103, 104. Freshman French. Reading and selected exercises in French syntax and composition, and collateral reading. Freshman course, both terms, 3 hours a week. Prerequisite course: Entrance French A, or French 101, 102. Prerequisite to French 203, 204. Professors Buffum, Critchlow, and Armstrong.

201, 202. Beginners' French. Grammar, composition, and reading. Sophomore elective, both terms, 3 hours a week. Professor Koren and Dr. van den Ven.

203, 204. Sophomore French. General introduction to the study of French literature. A survey of French literature, based on textbooks, with a study of representative works of different periods. Sophomore elective, both terms, 3 hours a week. Prerequisite course: French 103, 104 or Entrance French B. French 203, 204 is prerequisite to the French courses of junior and senior years. Professors Vreeland, Stuart, Armstrong, Buffum, Critchlow, and Gauss.

207, 208. Spanish. Grammar, composition, and reading of modern Spanish authors. Sophomore course, both terms, 3 hours a week. Prerequisite to Spanish 307, 308. Professors Marden and Critchlow.

301, 302. French. French Classical Literature. A study of the drama, prose, and social characteristics of the Age of Louis XIV. Class and preceptorial reading, written reports, and occasional lectures. Junior course, both terms, 3 hours a week. Prerequisite course: French 203, 204. Professor Collins.

305. Italian. Grammar, composition, and reading, Junior course, first term, 3 hours a week. Prerequisite to Italian 306. Professor Koren.

306. Italian. Reading of the *Inferno* of Dante. Literary

interpretation, with a study of Dante's life and times. Junior course, second term, 3 hours a week. Prerequisite course: Italian 305. Prerequisite to Italian 407. Professor Gauss.

307. Spanish. General survey of Spanish literature and extensive readings from modern Spanish authors, with practice in composition. Junior course, first term, 3 hours a week. Prerequisite courses: Spanish 207, 208. Prerequisite to Spanish 308. Professor Marden.

308. Spanish. Spanish literature of the Golden Age and readings from Cervantes, Calderón, and Lope de Vega. Junior course, second term, 3 hours a week. Prerequisite course: Spanish 307. Professor Marden.

401, 402. French. The Romantic Movement. A literary study of the leading French poets and prose writers from Rousseau to Anatole France. Lectures and preceptorial reading. Senior course, both terms, 3 hours a week. Prerequisite course: French 203, 204. Professor Gauss.

403, 404. Old French. A study of the language and literature of France from its origin to the Renaissance. General survey of the history of the language, and the extensive reading of texts with special attention to their literary side. Senior course, both terms, 3 hours a week. Prerequisite course: French 203, 204. Professor Buffum. [Not given, 1917-1918.]

405. French Literature of the Eighteenth Century. This course includes a survey of French literature from 1715 to the end of the eighteenth century, with a special study of Voltaire's relations to his times, the *Encyclopédie,* Diderot, and J. J. Rousseau. Senior course, first term, 3 hours a week. [Open also to juniors, 1917-1918.] Prerequisite course: French 203, 204. Professor Stuart.

406. French Literature of the Sixteenth Century. Extensive reading and selections from the sixteenth century French prose and poetry, with special attention to Montaigne, Rabelais, and the *Pléiade*. It includes also a study of the Renaissance in France, and of the beginnings of Classicism. Senior course, second term, 3 hours a week. [Open also to juniors, 1917-1918.] Prerequisite course: French 203, 204. Professor Vreeland.

407. Italian. Reading and literary study of the poets of the earlier period and the prose writers of the Renaissance. Senior course, first term, 3 hours a week. Prerequisite course: Italian 306. Prerequisite to Italian 408. Professor Koren.

408. Italian. Reading and literary study of the poets of the Renaissance and modern Italian authors. Senior course, second term, 3 hours a week. Prerequisite course: Italian 407. Professor Koren.

409, 410. Spanish. An advanced course in Spanish language and literature, including a study of Spanish American literature and institutions. Senior course, both terms, 3 hours a week. Prerequisite courses: Spanish 307, 308. Professor Marden.

FINAL SPECIAL HONORS

Juniors and seniors in the Department of Modern Languages may become candidates for Final Special Honors, in accordance with the general regulations for Final Special Honors. The special regulations are as follows:

Candidates for Final Special Honors will be enrolled in the regular courses of the Department but shall report in separate preceptorial groups.

1. *Honors Reading.*

A. GERMANIC SECTION; Either additional intensive work along the lines of the regular courses, or specialized work in the following subjects:

a. The Drama
b. The Novel
c. Non-dramatic Poetry
d. Literary Criticism

Note: A candidate for Final Special Honors must previously have taken Sophomore German 203-204.

B. ROMANIC SECTION:

a. The Drama
b. The Novel
c. Non-dramatic Poetry
d. Criticism and Literary Theories
e. History and Memoirs

2. *Reports.* Candidates for Final Special Honors shall make reports, written or verbal, at such times as may be required. At least one such report each term shall be in writing.

3. *Examinations.*

a. Candidates for Final Special Honors shall be required to pass the regular examinations at the close of each term in junior year, but the subject-matter of the extra reading on which they have made reports will not be embraced in these examinations.
b. Seniors in Honors work will be excused from the regular senior examinations in the departmental courses in Honors, but a final comprehensive examination, to be given during the senior examination period and covering all the Honors work (that is, the two departmental courses and the additional reading) done during junior and senior years, will be given at the close of senior year.
c. This comprehensive examination shall consist of two sections: one of four hours, which shall cover the work done in the regular courses; and another of four hours, which shall cover the work done in the candidate's special field of study.

d. An oral examination may also be given to Honors candidates at the close of senior year.

A statement of Honors reading will be issued.

For graduate courses in Modern Languages, see under the Graduate School.

COURSES NOT INCLUDED IN ANY OF THE PRECEDING DEPARTMENTS

*401, 402. Sanskrit. Senior course, both terms, 3 hours a week. Professor Robbins.

*407. History of Modern Science. This is a non-technical course in the development of scientific thought from the time of Copernicus and Galileo to the present. The course runs parallel to the courses in the history of philosophy and of literature and of political and social thought. The character and the influence of the great discoveries in Astronomy, Mechanics, Physics, Chemistry, and Biology will be studied by means of lectures and reading. The general purpose of the course is to give both the technical and the non-technical student information and training in the meaning and historical results of scientific investigation in different fields. Senior course, first term, 3 hours a week. Professor Spaulding. [Not given, 1917-1918.]

*401. History and Psychology of Education. This course is designed to meet the needs of students intending to teach. It presents the historical development of the educational principles and institutions which influence the present, and the applications of experimental psychology to the problems of teaching. Lectures and preceptorial work. Open to all students of psychology as an elective. Senior course, first term, 3 hours a week. Professor McComas. [Not given, 1917-1918.]

---

* Also listed as a graduate course.

C. DIVISION OF MATHEMATICS AND SCIENCE

VIII. DEPARTMENT OF MATHEMATICS

DEAN FINE (CHAIRMAN), PROFESSORS THOMPSON, EISENHART, *VEBLEN, *GILLESPIE, *BOUTROUX, MAC INNES, AND *WEDDERBURN; DR. *ALEXANDER, DR. PFEIFFER, AND MR. SMITH.

101. Plane Trigonometry. Hun and MacInnes: *Elements of Plane and Spherical Trigonometry.* Required of all freshmen who have not taken the subject for entrance. Half of first term, 4 hours a week. Professors Thompson, Veblen, and MacInnes, Dr. Pfeiffer, and Mr. Smith.

103. Selected portions of Algebra: Undetermined Coefficients, Division Transformation, Partial Fractions, Elementary Theory of Equations, Permutations and Combinations; Review of Plane Trigonometry; Elements of Spherical Trigonometry. Fine: *College Algebra;* Hun and MacInnes: *Elements of Plane and Spherical Trigonometry.* Required of all C.E. freshmen. All of first term, 4 hours a week. Professor MacInnes.

105. Selected portions of Algebra. Division Transformation, Permutations and Combinations, Determinants, and Elementary Theory of Equations. Fine: *College Algebra.* Required of all A.B., Litt.B. and S.B. freshmen who have not taken Plane Trigonometry for entrance. Half of first term, 4 hours a week. Professors Thompson, Veblen and MacInnes, Dr. Pfeiffer, and Mr. Smith.

108. Coördinate Geometry, treated from the Cartesian standpoint. Fine and Thompson: *Coördinate Geometry.* Required of all A.B., Litt.B.-B.S. freshmen who

* Absent.

have not offered Plane Trigonometry for entrance. All of second term, 4 hours a week. Professors Thompson, Veblen, and MacInnes, Dr. Pfeiffer, and Mr. Smith.

109, 110. Algebra, Coördinate Geometry and Calculus required of all A.B., Litt.B.-B.S. freshmen who have offered Plane Trigonometry for entrance. Both terms, 4 hours a week. Professors Fine, Thompson and Eisenhart.

201, 202. Calculus. Elective course, open to all sophomores who have not taken 109, 110. Both terms, 3 hours a week. Prerequisite to the Departments of Mathematics and Physics. Professors Fine and Thompson, and Dr. Pfeiffer.

203, 204. Calculus. Required of all C.E. sophomores, both terms, 4 hours a week. Professor MacInnes.

205, 206. Analytical Mechanics. Statistics; equilibrium of forces, stresses in frames, centers of gravity, moments of inertia. Kinetics; of the particle and rigid body, energy and work, friction, impact. Woodward: *Rational and Applied Mechanics.* Required of all C.E. sophomores, both terms, 3 hours a week. Professor MacInnes.

207, 208. Calculus and Elementary Differential Equations. Open to all sophomores who have taken 109, 110. [Not given, 1917-1918.]

301, 302. Algebra. Both terms, 3 hours a week. Professor Fine. [Not given, 1917-1918.]

303. Analytical Mechanics. Continuation of Analytical Mechanics 206. Woodward: *Rational and Applied Mechanics.* Required of all C.E. juniors, first term, 3 hours a week. Professor Constant.

305, 306. Coördinate Geometry. Second course. Junior course, both terms, 3 hours a week. Professor Thompson.

307, 308. Analysis. Differential Equations and Advanced Calculus. Junior course, both terms, 3 hours a week. Professor Fine. [Not given, 1917-1918.]

309, 310. Analytical Mechanics. Introductory course. Junior course, both terms, 3 hours a week. Professor Eisenhart.

*403, 404. Differential Geometry. Prerequisite: Geometry 305, 306. Senior course, both terms, 3 hours a week. Professor Eisenhart. [Not given, 1917-1918.]

*405, 406. Algebra. Theory of equations. Linear dependence. Matrices. Senior course, both terms, 3 hours a week. Professor Fine. [Not given, 1917-1918.]

*407, 408. Projective Geometry. Senior course, both terms, 3 hours a week. Professor Eisenhart.

*409, 410. Analysis. Theory of functions of a complex variable. Senior course, both terms, 3 hours a week. Professor Fine.

A departmental student who is not a candidate for Final Special Honors in Mathematics shall take two of the above mentioned junior courses in his junior year, and in his senior year two courses of which one shall ordinarily be the third junior course and the other either Physics 403, 404, or one of the above mentioned senior courses.

FINAL SPECIAL HONORS

A candidate for Final Special Honors in Mathematics shall take two of the junior courses in his junior year, and in his senior year any two of the remaining three in the list of courses above given for which he is qualified. He shall also be required in

---

* Also listed as a graduate course.

connection with the courses which he takes to do work in addition to that required of non-Honors students.

For regulations regarding Final Special Honors in Mathematics and Physics, see page 188.

For graduate courses in Mathematics, see under the Graduate School.

IX. DEPARTMENT OF PHYSICS

DEAN MAGIE (CHAIRMAN), PROFESSOR LOOMIS, DEAN MCCLENAHAN, PROFESSORS *TROWBRIDGE, *ADAMS, ROBINSON, *COOKE, NORTHRUP AND COMPTON; *MR. CRAGOE, AND *MR. FRENCH

101, 102. General Physics. General course in physics, including lectures, recitations, and laboratory work. Freshman course, for all C.E. freshmen, and for Litt.B. and B.S. freshmen who do not take the alternative course in General Chemistry (Chemistry 103, 104). Both terms, 4 hours a week. For this course a fee of $5 is charged and a deposit on apparatus of $5 is required. Professors McClenahan and Compton.

201, 202. General Physics. General course in physics, including lectures, recitations, and laboratory work. Sophomore course, for A.B. sophomores who do not take the alternative course in General Chemistry (Chemistry 201, 202) and for Litt.B. and B.S. sophomores who take General Physics. Both terms, 4 hours a week. For this course a fee of $5 is charged, and a deposit on apparatus of $5 is required. Professors McClenahan and Compton.

203, 204. Heat, Electricity and Magnetism. Lectures

based on experimental demonstrations. Frequent written recitations. Sophomore course, elective for Litt.B. and B.S. sophomores who have taken General Physics in freshman year. Both terms, 3 hours a week. Professor W. F. Magie.

205, 206. Heat, and Electricity and Magnetism. Lectures based on experimental demonstrations. Frequent written recitations. Sophomore course, required of C.E. sophomores. Both terms, 3 hours a week. Professor Loomis.

301, 302. Experimental Physics. A course in experimental physics, with lectures and laboratory work. Miller. *Laboratory Physics.* Reference books: Stewart and Gee; Millikan. Junior course, both terms, 3 hours a week. Professor Loomis.

309, 310. (Mathematics 309, 310.) Analytical Mechanics. Introductory course. Junior course, both terms, 3 hours a week. Professor Eisenhart.

401, 402. Theoretical Physics. A course in the elementary mathematical theories of light and heat. Lectures. Senior course, both terms, 3 hours a week. Prerequisite course: Mathematics 201, 202. Professors Robinson and W. F. Magie.

403, 404. Theoretical Physics. A course in the mathematical theory of electricity and magnetism. Lectures. Senior course, both terms, 3 hours a week. Prerequisite course: Mathematics 201, 202. Professor Trowbridge. [Not given, 1917-1918.]

HONORS COURSES IN PHYSICS*

The Department of Physics offers, in conjunction with the Department of Mathematics, the following courses, which are open to candidates for Final Special Honors in Mathematics and Physics:

* Honors courses are not given, 1917-1918. An arrangement will be made for honors candidates.

309, 310, C. Analytical Mechanics. Introductory course. Junior course, both terms, 3 hours a week. Professor Eisenhart.

311, 312, D. Honors Course in General Physics. [Not given, 1917-1918.]

a. Electricity and Magnetism. The electric current. Resistance. Electromotive force. Electrolysis. Batteries. The principles of electrical measurements. The electric field. Electrostatic instruments. The phenomena of discharge. Magnetism. [Not given, 1917-1918.]

b. Physical Optics. Elementary discussion of the undulatory theory. Interference, Young's and Fresnel's experiments. Diffraction. Applications to the theory of optical instruments. Double refraction and polarization. Simple cases of effect of crystal plates. Rotary polarization. Dispersion and absorption. Spectrum analysis. Junior course, both terms, 3 hours a week. Professor Trowbridge. [Not given, 1917-1918.]

313, 314, E. Experimental Physics. Experiments in mechanics, properties of matter, sound, heat, and light. Junior course, both terms, 3 hours a week. Professor Robinson. [Not given, 1917-1918.]

*411, 412, C. Theory of Electricity and Magnetism. Theory of the potential and of lines and tubes of force. The principles of electrostatics. The electrostatic field. System of charged conductors. Dielectrics. Special problems of electrostatics. Currents of electricity in linear conductors. The flow of electricity in solid conductors and in dielectrics. The principles of magnetism. Induced magnetism. Terrestrial magnetism. The magnetic field produced by electric currents. In-

*Also listed as a graduate course.

duction in linear circuits. The general equations of the electromagnetic field. Electromagnetic waves and the electromagnetic theory of light. The motion of electrons. Senior course, both terms, 3 hours a week. Professor Adams. [Not given, 1917-1918.]

*413, 414, d. Theoretical Physics.

a. Thermodynamics. The classical theories of Clausius and Lord Kelvin. Gibbs' theory of thermodynamic equilibrium. Applications to homogeneous bodies, to the ideal gas, and to solutions.

b. The Electron Theory. Atomic theory of electricity. Properties of moving charges. Electromagnetic mass. Zeeman effect. Conduction of electricity through gases. Determination of the ratio of the charge on an electron to its mass. Determination of the charge. Radioactivity. Roentgen Radiation. Electron theory of electrical and thermal conduction. Theories of atomic structure. Senior course, both terms, 3 hours a week. Professors W. F. Magie and Compton. [Not given, 1917-1918.]

*415, 416,e. Experimental Physics. Experiments in electricity and magnetism. Special problems involving exercise in the experimental methods used in research. Senior course, both terms, 3 hours a week. Professor Northrup. [Not given, 1917-1918.]

FINAL SPECIAL HONORS IN MATHEMATICS AND PHYSICS

Candidates for honors enter the Honors Courses at the beginning of junior year if they have fulfilled the conditions of entrance prescribed in the general regulations for Final Special Honors.

The Honors Courses in Mathematics and Physics are as follows:

* Also listed as a graduate course.

Junior Year

A. Geometry 305, 306
B. Analysis 307, 308
C. Applied Mathematics (Mechanics) 309, 310
D. Theoretical Physics 311, 312
E. Experimental Physics, 313, 314

A candidate for Honors in Mathematics and Physics selects three of these courses, of which one must be the course C, unless a different choice is permitted by the departments.

Senior Year

a. Differential Geometry 403, 404
g. Algebra 405, 406
b. Analysis 409, 410
c. Applied Mathematics (Electricity and Magnetism) 411, 412
d. Theoretical Physics 413, 414
e. Experimental Physics 415, 416
f. Celestial Mechanics 401, 402

Courses A, B, C, D, E of junior year are prerequisite to the courses a, b, c, d, e of senior year respectively. A candidate for Honors in Mathematics and Physics takes three courses selected from those of the courses a, b, c, d, e, f, g, of which the prerequisites have previously been taken or from those of the courses A, B, C, D, E, which have not been taken.

For graduate courses in Physics, see under the Graduate School.

X. DEPARTMENT OF CHEMISTRY

PROFESSORS MC CAY (CHAIRMAN), NEHER, HULETT, FOSTER, MENZIES, SMITH, VAN NEST, AND SPAULDING; MR. FLEECE, MR. HARDING, MR. BURNS, MR. CALDWELL, AND MR. CUDE.

101, 102. General Inorganic Chemistry. Experimental lectures on the elements and their compounds, supplemented by laboratory work. Two lectures and one laboratory exercise of 3 hours each week. Smith: *General Chemistry for Colleges.* Required of C.E. freshmen, both terms, 3 hours a week. Professor Van Nest, assisted by Mr. Burns.

103, 104. General Inorganic Chemistry. Experimental lectures on the elements and their compounds, supplemented by laboratory work. Two lectures, one recitation, and one laboratory exercise of 3 hours each week. The laboratory work is in part introductory to qualitative analysis. Smith: *General Chemistry for Colleges.* Freshman course, elective for Litt.B. and B.S., alternative to Physics 101, 102. Both terms, 4 hours a week. Prerequisite to all later courses in chemistry and mineralogy and to the Departments of Chemistry, Biology, and Geology. Professor Foster (Section III) and Professor Menzies (Section IV), assisted by Mr. Fleece, Dr. Spaulding, Mr. Harding, Mr. Burns, and Mr. Cude.

201, 202. General Inorganic Chemistry. Experimental lectures on the elements and their compounds, supplemented by laboratory work. Two lectures, one recitation, and one laboratory exercise of 3 hours each week. The laboratory work is in part introductory to qualitative analysis. Smith: *General Chemistry for Colleges.* Sophomore elective, both terms, 4 hours a week. Prerequisite to all later courses in chemistry

and mineralogy and to the Departments of Chemistry, Biology, and Geology. Professor Foster (Section I) and Professor Menzies (Section II), assisted by Mr. Fleece, Dr. Spaulding, Mr. Harding, Mr. Burns, and Mr. Cude.

301. Qualitative Analysis. The course involves about 9 hours of laboratory work, besides a classroom exercise, each week. Junior course, first term, 4 hours a week. This course may also be taken as a sophomore elective for Litt.B. and B.S. students who have taken Chemistry 103, 104. Prerequisite course: General Chemistry. Required in the Department of Chemistry. Professor Smith.

302. Quantitative Analysis, Part I. The theory and practice of typical gravimetric and volumetric analyses, chiefly the analyses of simple salts. This course involves about nine hours of laboratory work, in addition to one or more class exercises, each week. Junior course, second term, 3 hours a week. Prerequisite courses: General Inorganic Chemistry and Qualitative Analysis. Prerequisite to the later courses in Quantitative Analysis. Required in the Department of Chemistry. Professor McCay, assisted by Mr. Cude.

For Honors: Reading, reports, and laboratory work.

303. Organic Chemistry. Brief general course. Lectures, recitations, and laboratory work. Moore: *Outlines of Organic Chemistry.* Junior course, first term, 4 hours a week. Required in the Department of Biology and *not open to students in other departments.* This course may be taken by B.S. sophomores who have taken Chemistry 103, 104 and who intend to enter the Department of Biology, but only on recom-

mendation of the Department of Biology. [Not given, 1917-1918, but combined with 306.]

304. Qualitative Analysis. Lectures, recitations, and laboratory work., Junior course, first term, 4 hours a week. Required in the Department of Biology and *not open to students of other departments.* Chemistry 103, 104 or 201, 202 is prerequisite to this course. The course may be taken also by B.S. sophomores who have had Chemistry 103, 104 and who intend entering the Department of Biology, but only on recommendation of that department. Professor Van Nest.

305. Physical Chemistry, Part I. Two lectures and one laboratory period. Senter: *Outlines of Physical Chemistry.* Findlay: *Practical Physical Chemistry.* Molecular theory and molecular weight determinations by standard methods. Junior course, first term, 3 hours a week. Required in the Department of Chemistry. Professor Hulett.

For Honors: Application of the molecular weight methods to special problems and a study of exceptions to the general laws.

306. Organic Chemistry, Part I. Introductory course devoted mainly to the study of the simpler saturated and unsaturated open chain hydrocarbons, alcohols, aldehydes, ketones, and acids, together with their more important immediate derivatives and homologues. Lectures, recitations, and laboratory work. Neher: *Lecture Outlines;* Cohen: *Theoretical Organic Chemistry;* Neher: *Laboratory Outlines;* Gattermann: *Practical Methods of Organic Chemistry.* Junior course, second term, 3 hours a week. Required in the Department of Chemistry. Prerequisite: Qualitative Analysis 301 or Physical Chemistry I 305. Professor Neher, assisted by Mr. Caldwell.

For Honors: Special reading, conferences, and laboratory work.

401. Quantitative Analysis, Part II. Continuation of Part I, including salts, minerals, and alloys. This course involves about nine hours of laboratory work, in addition to one or more class exercises, each week. Senior course, first term, 3 hours a week. Prerequisite courses: General Inorganic Chemistry, Qualitative Analysis, Quantitative Analysis I. Prerequisite to Quantitative Analysis III. Required in the Department of Chemistry. Professor McCay, assisted by Mr. Cude.

For Honors: Reading, reports, and laboratory work.

*402. Quantitative Analysis, Part III. Systematic volumetric analysis: alkalimetry, acidimetry, oxidation methods, direct and indirect; reduction methods, precipitation methods. This course involves about nine hours of laboratory work, in addition to one or more class exercises, each week. Senior course, second term, 3 hours a week. Prerequisite courses: General Inorganic Chemistry, Qualitative Analysis, Quantitative Analysis I and II. Professor McCay, assisted by Mr. Cude.

For Honors: Reading, reports and laboratory work.

403. Organic Chemistry, Part II. Continuation of Part I, including aliphatic compounds of multiple and mixed function, especially the hydroxy-acids and the dibasic acids with their derivatives, and an introduction to stereochemistry; the carbohydrates and the uric acid group in outline; the simpler cyclic compounds, benzene and its derivatives, aromatic nitrogen compounds, phenols, quinones, dyes, etc. Lectures, recitations, and laboratory work. Texts as given under Part I

*Also listed as a graduate course.

(306). Senior course, first term, 3 hours a week. Required in the Department of Chemistry. Professor Neher.

For Honors: Special reading, conferences, reports, and laboratory work.

*404. Organic Chemistry, Part III. Devoted to a more detailed study of special subjects and theories, malonic ester and acetoacetic ester; carbohydrates; amino-acids and polypeptides; urea, ureides, and purines; benzene theory; dyes and color theory, etc. Lectures. recitations, and laboratory work. Senior course, second term, 3 hours a week. Prerequisites: Parts I and II or equivalents. Cohen: *Organic Chemistry for Advanced Students.* Professor Neher.

For Honors: Special reading, conferences, reports, and laboratory work.

405. Physical Chemistry, Part II. Two lectures and one laboratory period. Senter: *Outlines of Physical Chemistry.* Findlay: *Practical Physical Chemistry.* Theories of solutions, solubilities, determination of solubilities, conductivity, &c. Senior course, first term, 3 hours a week. Required in the Department of Chemistry. Professor Hulett.

For Honors: Application of solubility and conductivity to analytic problems. Reading on the theories of solutions.

*406. Physical Chemistry, Part III. One lecture and two laboratory periods. Nernst: *Theoretical Chemistry;* Ostwald-Luther: *Physiko-Chemische Messungen.* Equilibrium and the velocity of reactions. Senior course, second term, 3 hours a week. Professor Hulett.

For Honors: Reading on the phase rule and experimental application to practical problems.

* Also listed as a graduate course.

407. Rise and Development of Chemical Theories. Lectures and written recitations. Meyer: *Modern Theories of Chemistry;* Oswald: *Outlines of Theoretical Chemistry.* Senior elective course, first term, 3 hours a week. Prerequisite course: General Inorganic Chemistry. Professor McCay.

*410. Advanced Inorganic Chemistry. Discussion of facts, methods and principles in classroom based upon experimental work in the laboratory and upon assigned reading. Crystal form and habit, isomorphism, X-rays and crystal structure, tests of purity, salt hydrates and their equilibrium conditions, double salts and the phase rule, cooling curves, solidification of molten masses, the thermal equilibrium diagram, aluminothermy, colloids, inorganic isomerism, the cobaltammines, the minor elements, and other topics will receive introductory treatment. This course must be preceded or accompanied by courses 302 and 401. Senior course, second term, four hours a week. Professor Menzies.

For Honors: Special reading, conferences, and laboratory work.

FINAL SPECIAL HONORS

Juniors and seniors in the Department of Chemistry may become candidates for Final Special Honors, in accordance with the general regulations for Final Special Honors.

Candidates for Final Special Honors in Chemistry shall take two courses in Chemistry throughout junior and senior years in conformity to the plan outlined below.

In courses which are mainly of an introductory character, such as the first courses in qualitative and quantitative analysis, organic chemistry and physical chemistry, Honors students will be required to do additional reading, or addi-

* Also listed as a graduate course.

tional laboratory work, or both. They will meet in special divisions for recitations and conferences and will be given special examinations upon the work of the courses. In the more advanced courses, the work of Honors students will be further distinguished in subject matter as well as in quality and quantity, and, when necessary or advisable, entirely separate courses will be arranged for the accommodation of Honors men.

In place of the regular term examinations at the end of senior year, comprehensive final examinations upon the Honors work of both junior and senior years will be held.

Junior Year

Either 301. Qualitative Analysis and 302. Quantitative Analysis I
305. Physical Chemistry I and 306. Organic Chemistry I
or 401. Quantitative Analysis II and 402. Quantitative Analysis III
305. Physical Chemistry I and 306. Organic Chemistry I

Senior Year

In the first term any two of
401. Quantitative Analysis II
403. Organic Chemistry II
405. Physical Chemistry II
In the second term
410. Advanced Inorganic Chemistry, together with one of
402. Quantitative Analysis III
404. Organic Chemistry III
406. Physical Chemistry III

For graduate courses in Chemistry, see under the Graduate School.

XI. DEPARTMENT OF GEOLOGY

PROFESSORS SCOTT (CHAIRMAN), PHILLIPS, SMYTH, *FARR, *VAN INGEN, AND SINCLAIR; MR. *HOWELL.

201, 202. Geology. Beginners' course, covering the subject in outline and designed both for those who intend to pursue the subject further, and for those who desire merely to obtain a general knowledge of the science. Scott: *Introduction to Geology.* Sophomore course, both terms, 3 hours a week. First term, Physical Geology; second term, Outline of the Geological History of the Earth. Prerequisite to courses 301-302, 401, 405. Lecturer, Professor Scott. Preceptors, Professors Farr and Sinclair, and Mr. Howell.

301, 302. Structural Geology. Study of the common rocks and their most important structural relations; interpretation of geological maps and sections; the elements of geological surveying and mapping. Essentially a laboratory and field course. Field work required of all students. Junior course, both terms, 3 laboratory periods of 2 hours each per week. Prerequisite course: Geology 201, 202. Prerequisite to Geology 403 and 405. Professor Sinclair.

For Honors: Additional field work with written reports thereon.

303. Descriptive Mineralogy. Lectures and recitations on descriptive mineralogy, with laboratory practice in determination of the common minerals by means of their physical characters. Phillips: *Mineralogy.* Junior course, first term, 3 hours a week. Prerequisite course: General Chemistry. Prerequisite to courses 403, 407, 408. Professor Phillips.

For Honors: Extra reading to be designated and the study of a special collection of minerals comprising 150 species.

* Absent.

304. Determinative Mineralogy. Lectures and laboratory work in blowpipe analysis and the determination of minerals by means of chemical tests. Phillips: *Mineralogy.* Junior course, second term, 3 hours a week. Professor Phillips.

306. Introduction to Palaeontology. The scope, problems, methods, and results of the study of fossil organisms, with special reference to those that have important geological relations. Junior course, second term, 3 hours a week. Lectures and conferences. Prerequisite courses: General Geology or Biology. Professor van Ingen and Mr. Howell.

For Honors: Laboratory work on special collections of fossil plants and animals. Reading of special papers in journals.

[Note: Departmental students must take either 304 or 306; and may take the other as a free elective.]

*401, *402. Historical Geology. The geological history of the earth from its origin to recent times. The geographic, structural, and climatic changes, and the characteristic plants and animals of each period in its history. Lectures, conferences, and field work. Scott: *Introduction to Geology.* Senior course, both terms, 3 hours a week. Prerequisite course: Geology 201, 202. Professors Scott and van Ingen.

For Honors: Extra reading: Geikie: *Textbook of Geology,* vol. ii.; study of certain Geologic Folios; take part in four field trips during each term and prepare report on each; and study a collection of index fossils of the geological formations.

*403. Structural and Dynamic Geology. A study of the composition and structural features of the earth's crust. Lectures, laboratory and field work. Senior

* Also listed as a graduate course.

course, first term, 3 hours a week. Prerequisite courses: Geology 301, 302 and Mineralogy 303. Professor Smyth.

*404. Economic Geology. The principles controlling the circulation of mineral matter in the earth's crust, and its concentration into workable deposits. Lectures and laboratory work. Prerequisite course: Geology 403. Senior course, second term, 3 hours a week. Professor Smyth.

For Honors in 403, 404, Dynamic and Economic Geology: Reading of chapters in Van Hise: *Metamorphism,* and other monographs of the U. S. Geol. Survey; Harker: *Natural History of Igneous Rocks;* Posepny and others: *Genesis of Ore-Deposits;* Clark: *Data of Geochemistry;* Elsden: *Principles of Chemical Geology;* Lindgren: *Mineral Deposits.* Study of Geologic Folios.

*405, 406. Practical Geology. A course designed to give instruction in the exact methods of securing the information upon which the body of geological science is based. It will provide practical training (1) for students who anticipate entering any phase of business connected with the exploitation of natural resources such as fuels, ores, and building materials, and (2) for students who expect to engage in teaching or in professional work on the staffs of museums and federal or state surveys. Lectures, laboratory, library and field work. Senior course, both terms, 3 hours a week. Prerequisites: Geology 201-202, 301-302 or Palaeontology 306. Professor van Ingen and Mr. Howell.

For Honors, students will be required to give special attention to two instead of one of the phases of the geological investigation of the region studied.

*407. Crystallographic Mineralogy. Lectures and labora-

* Also listed as a graduate course.

tory work on crystallography and the optical properties of crystals. Phillips: *Mineralogy.* Senior course, first term, 3 hours a week. Prerequisite course: Mineralogy 303. Professor Phillips.

For Honors: Extra reading to be designated, and additional drawing of crystal forms with cutting of crystal models.

*408. Optical Mineralogy. Lectures and laboratory work on the optical properties of the rock-forming minerals, with instruction in the general practice of petrographic methods. Phillips: *Mineralogy.* Senior course, second term, 3 hours a week. Prerequisite course: Mineralogy 407. Professor Phillips.

For Honors: Two hours additional laboratory work on goniometer and in grinding mineral and rock sections. Study chapters of Tutton: *Crystallography;* Groth-Jackson: *Optical Mineralogy,* and Iddings: *Rock Minerals.*

FINAL SPECIAL HONORS

Each candidate shall take two departmental courses of junior year and at least three of the four departmental courses of senior year. In the first term of junior year he must take 301 and 303. In the second term he must take 302 and either 304 or 306, and he may elect both, taking the third course as a free elective. In the latter event he will be held for honors work in 302 and that one of the other two courses to be indicated by him.

In senior year, 401-402 and 403-404 and a third course will be taken, and if a fourth course in the Department be taken as a free elective and so indicated by the candidate, honors work will not be required in it.

In addition to the extra work mentioned under the individual courses he may elect, each candidate will be expected to read during his two years the works mentioned below.

* Also listed as a graduate course.

Those marked with an asterisk are recommended for reading during junior year.

*Lyell: *Principles of Geology,* vol. I, except chapters II, III, and IV.
*Willis: *Mechanics of Appalachian Structure,* (13th Ann. Rept. U. S. Geological Survey).
*Geikie: *Founders of Geology.*
*Davis: *Geographical Essays;* chapters 3, 12-26.
*Bernard: *Principles of Palaeontology,* translation in 48th Report Regents University State of New York, vol. II, p. 127-215.
Palaeontological Society Conference Papers on the Aspects of Palaeontology
Iddings: *Volcanism.*
Bain: *Types of Ore Deposits.*
Yale University: *Problems of American Geology.*
Wright, W. B.: *The Quaternary Ice Age.*

GEOLOGY CLUB

The Geology Club, for the discussion of investigations and for the review of current literature, meets weekly. Active participation is required of all graduate students in Geology, and of candidates for Final Special Honors in Geology.

SUMMER COURSE IN FIELD GEOLOGY

Juniors who contemplate electing the major part of their senior studies in the Department of Geology are strongly advised to take part in the optional field work which will be offered during a portion of each summer vacation. Field parties have operated in recent years in the Champlain and Mohawk valleys in New York, in central Pennsylvania, Wyoming, Nebraska, and Newfoundland.

Graduate students are advised to join a field party during the summer previous to their first year of residence.

For graduate courses in Geology, see under the Graduate School.

XII. DEPARTMENT OF BIOLOGY

PROFESSORS SCOTT, RANKIN, MC CLURE, CONKLIN (CHAIRMAN), DAHLGREN, SHULL, *FARR, †HARVEY, AND CARY; DR. PATON, DR. MAYER; MR. *SILVESTER, MR. MACY, MR. HELMICK, AND MR. GEORGE.

201, 202. General Biology. Lectures, laboratory work, and recitations. An introduction to the fundamental properties of living things, their functions, structures, classification, habits, life-histories, and evolution. Selected forms are studied in the laboratory as illustrating the chief principles and generalizations of biology. Sophomore elective for students in all courses, both terms, 3 hours a week. Must be preceded or accompanied by General Chemistry 103, 104, or its equivalent. Prerequisite to the subsequent courses in Biology, except Botany 303, 304. Professors Conklin and Cary.

303, 304. Botany. Practical work in the field and laboratory, lectures and recitations. An introduction to the general principles of plant life. Besides the structure and functions of plants, their taxonomy and their relation to their environment will be studied, use being made of the facilities offered by the grounds of the University. Junior course, both terms, 3 hours a week. Professor Rankin.

305. Comparative Osteology. Ontogeny and comparative structure of the skeletons of the different classes of vertebrates. Exercises in descriptive work. Each student must prepare a thesis on a skeleton especially assigned for his study. Junior course, first term, 3 hours a week. Must be preceded or accompanied by General Biology 201, 202. Professor Farr. [Not given, 1917-1918.]

* Absent.
† Absent first term.

305 *a*, 306. Invertebrate Zoology. Lectures and laboratory work on selected phyla of invertebrates. Junior course, both terms, 3 hours a week. Prerequisite course, General Biology 201. Professor Cary.

*401. Comparative Anatomy of Vertebrates. Lecture and laboratory course. Lectures on the comparative anatomy of the organ systems of vertebrates, and dissection of the dog-fish and a mammal. Senior course, first term, 3 hours a week. Prerequisite courses: Sophomore and junior courses in Biology. Professor McClure and Mr. Silvester.

*402. Vertebrate Embryology. Lecture and laboratory course. A comparative study of the development of vertebrates. Senior course, second term, 3 hours a week. Prerequisite course: Comparative Anatomy 401. Professor McClure and Mr. Silvester.

*403. Histology. A study of protoplasm, cells, and tissues as they underlie animal and vegetable life; the histology of the fundamental tissues of support, energy production, sensation and conduction. Senior course, first term, 3 hours a week. Prerequisite course: Biology 201, 202. Professor Dahlgren.

*404. Advanced Histology. The comparative Histology of the tissues of reproduction, assimilation, circulation, excretion and secretion. Practice in microscopical technic. Thesis. Senior course, second term, 3 hours a week. Continuation of Histology 403. Professor Dahlgren. [Given first term, 1917-1918.]

*406. Vertebrate Palaeontology. Lectures and laboratory work on fossil vertebrates. Senior course, second term, 3 hours a week. Prerequisite courses: Biology 201, 202, and Osteology 305. Professors Scott and Farr.

*407, *408. General Physiology. Lectures and laboratory

* Also listed as a graduate course.

work. An introduction to the phenomena exhibited by living matter. The substances of which organisms are composed will be studied and their rôle in the functioning of the cell discussed. The general physiology of muscle and nerve tissue, of the digestive tract (including absorption, nutrition, secretion and excretion) and of the circulatory system (including respiration) will then be taken up, followed by an account of the coördinate activities of the nervous system, reflexes, tropisms, and the phenomena of reproduction, growth and regeneration. Senior course, second term, 6 hours a week. Prerequisite course: Biology 201, 202. Professor Harvey.

*409, 410. Genetics. Lectures, recitations, and laboratory work. The development, variation, modification and inheritance of morphological and physiological characteristics of plants and animals, and the application of the principles of genetics to the improvement of plants, animals, and man. Laboratory work will consist largely of actual research on simple problems calculated to give facility in the collection and analysis of data, and an insight into the principles involved in development, variation and heredity. Well written theses presenting the results of the laboratory work will be expected of each student. Senior course, both terms, 3 hours a week. Prerequisite course: Biology 201, 202. Professor Shull and Mr. Helmick.

FINAL SPECIAL HONORS

Juniors and seniors in the Department of Biology may become candidates for Final Special Honors, in accordance with the general regulations for Final Special Honors.

1. Candidates for Final Special Honors in Biology must

*Also listed as a graduate course.

take the course in General Biology (201, 202) either in their sophomore or junior year.

2. In junior year they must take:

Advanced General Biology (301); 3 hours a week, with reading and laboratory work, 1st term.

Invertebrate Zoölogy (305 *a*, 306); with 3 hours a week supplementary reading and laboratory work, both terms.

Botany (303, 304); with 3 hours a week supplementary reading and laboratory work, both terms.

3. In senior year they must take two of the following courses:

Comparative Anatomy (401); with 3 hours a week supplementary reading and laboratory work, 1st term. Vertebrate Embryology (402); with 3 hours a week supplementary reading and laboratory work, 2nd term.

General Physiology (407, 408); with 3 hours a week supplementary reading and laboratory work, both terms.

Histology (403, 404); with 3 hours a week supplementary reading and laboratory work, both terms.

Genetics (409, 410); with 3 hours a week supplementary reading and laboratory work, both terms.

4. In place of the regular term examinations at the end of senior year, candidates for Final Special Honors in Biology shall take comprehensive examinations covering the Honors work of both junior and senior years.

5. In addition to the supplementary work in connection with each of the courses named, candidates for Final Special Honors in Biology are expected to read the following works before the clase of senior year and to pass an oral examination on them:

Beddard: *Geographical Distribution*

Darwin: *Origin of Species*
Ganong: *The Living Plant*
Huxley: *Man's Place in Nature*
Kellogg: *Darwinism Today.*
Locy: *Biology and its Makers*
Mendel: *Experiments in Plant Hybridization*
Wallace: *Malay Archipelago*
Walter: *Genetics*
Weismann: *The Germ Plasm*

For graduate courses in Biology, see under the Graduate School.

XIII. DEPARTMENT OF ASTRONOMY

PROFESSORS RUSSELL (CHAIRMAN) AND DUGAN

301. Astronomy. Elementary Astronomy. Mainly descriptive, exhibiting the leading facts regarding the solar system and an elementary explanation of the methods by which they are ascertained. Recitations on textbook, with lectures. Young: *Manual of Astronomy.* Junior course, first term, 3 hours a week. Professor Russell.

302. Astronomy. Stellar Astronomy. A review of the present state of knowledge concerning the stars. Stellar positions, proper-motions, radial velocities, and parallaxes; group and stream motions; visual and spectroscopic binaries; stellar spectra, colors, and temperatures; variable and new stars; masses and densities of the stars; characteristics of different spectral types; distribution of the stars in space; clusters and nebulae; theories of stellar evolution. Lectures. Junior course, second term, 3 hours a week. Professor Russell.

*401, 402 *f.* Astronomy. Honors Course in Celestial Me-

*Also listed as a graduate course.

chanics. Open to candidates for Honors in Mathematics and Physics. Elliptic motion; determination of orbits; disturbed motion; tidal evolution. Moulton: *Introduction to Celestial Mechanics.* Senior course, both terms, 3 hours a week. To be eligible to this course, a student must be familiar with the differential and integral calculus, and the elements of differential equations. Professor Russell.

403, 404. Astronomy. Practical Astronomy. The principal methods and instruments of astronomical observation; determination of latitude and time; work with the sextant, transit, equatorial, and spectroscope. Classroom exercises, with observatory work. Campbell: *Elements of Practical Astronomy.* Senior course, both terms, 3 hours a week. Prerequisite course, Astronomy 301. Professor Dugan.

Navigation and Seamanship. Nautical Astronomy. The sextant and chronometer and their use. Determination of latitude, time, and longitude. Sumner's method. Navigation. The Compass. Variation and Deviation. Piloting. Use of charts and other aids to navigation. Tides and Currents. Rules of the Road. Deep water navigation. Dead Reckoning. Great Circle Sailing. Law of Storms. Avoidance of Hurricanes.

This course covers the subjects required for the Government examinations for Master's and Mate's licenses.

Lectures. Recitations and practical work. Open to suitably qualified Sophomores, Juniors, and Seniors. First term. Three hours a week. Professor Dugan and Doctor Mayer.

FINAL SPECIAL HONORS

Candidates for Final Special Honors in Astronomy are required to take courses 301, 302, 401, 402, 403, 404.

In junior year, they shall also take one course in each term in some subject cognate to that of their department. This course will be assigned in each individual case by the department, after conference with the student.

The additional work planned for the two years for such candidates is as follows:

Junior Year

Study of the heavens with the naked eye. Identification of the stars, planets and other heavenly bodies, and study of their motions, both by observation and with the aid of ephemerides. Study of astronomical photographs of the moon and stars.

Books of reference: Schurig: *Himmels-Atlas;* American Ephemeris.

Senior Year

Telescopic observation of the heavenly bodies. Study of special problems in Practical Astronomy. Readings on selected topics in current astronomical literature.

For graduate courses in Astronomy, see under the Graduate School.

XIV. DEPARTMENT OF HYGIENE AND PHYSICAL EDUCATION

PROFESSORS RAYCROFT (CHAIRMAN), LUEHRING, AND TOOKER; DR. VANNEMAN, MR. SULLIVAN AND MR. FOGGITT

The aim of the work in this Department is to promote the general health and physical efficiency of the students; and to stimulate the formation of habits of rational exercise and healthy living that will be continued after graduation. All members of the freshman class are required to take regular work as indicated below.

Personal Hygiene. Lectures and recitations. A discussion of the fundamentals of health and physical efficiency; the influence of diet, exercise, bathing and sleep; the effects of personal habits; the use of alcohol and tobacco; and a study of the more common infectious diseases—their nature, causes, methods of transmission and prevention. The lectures will be illustrated by the use of manikins, diagrams, and lantern slides. Reference books: Hough and Sedgwick, Woodhull, and Pyle. Freshman course, both terms, 1 hour a week. Professors Raycroft, Luehring, and Tooker.

Physical Examinations. Each student is given a careful physical examination which serves as a basis for advice as to special corrective exercises, if needed, and affords an opportunity for a discussion with each individual on the various practices and habits that affect his physical and mental efficiency. This examination includes a few anatomical observations; and an examination of the eyes, nose, ears, throat, and the vital organs. Professors, Raycroft, Luehring, and Tooker, and Mr. Foggitt.

Graded Exercises. The work consists of a large variety of games and exercises conducted under the supervision of the Department. It is graded to meet the needs and ability of those in the classes, and is conducted out-of-doors whenever possible. The student may select the squad or class with which he will work, but every freshman must pass a test in swimming, in which classes are organized for beginners. Life-saving and methods of resuscitation are taught in all classes. Required of all freshmen, both terms, 3 hours a week. Professors Luehring and Tooker, Mr. Sullivan, and Mr. Foggitt.

COURSES NOT INCLUDED IN ANY OF THE PRECEDING DEPARTMENTS

Graphics 201 *a*. Elementary Drafting. Taken by beginners, in conjunction with 201 *b*, the two having three hours credit. Elective in sophomore and higher years. First term, one exercise a week. Professor Willson.

Graphics 201 *b*. Descriptive Geometry. The fundamental problems of the point, line and plane, with applications to developable and other surfaces, and including trihedrals. Practically applied in the solution of problems on the drawing-board and by the construction of models. Elective in sophomore and higher years. Prerequisite to course 202 *b*, first term, two three-hour periods (afternoons) a week. Professor Willson.

Graphics 202 *a*. Extension of 201 *a*. Second term, one exercise a week, but taken in connection with 202 *b* for a three-hour credit. Elective in sophomore and higher years. Professor Willson.

Graphics 202 *b*. Descriptive Geometry. Advanced course, with applications. Elective in sophomore and higher years when 201 *b* has been taken. Two three-hour periods (afternoons) a week in second term. Professor Willson.

Graphics 202 *c*. Stereotomy. Applications of descriptive geometry to problems in stone cutting. Taken with 202 *b* as an alternative to 202 *a* when the equivalent of the latter has already been taken. Elective in sophomore and higher years, second term, one exercise a week. Professor Willson.

Military History, Strategy, Tactics, 301-302, 401-402. This course will consist of a study of Napoleon's Italian Campaigns and of lectures and talks upon Strategy and Tactics. The course will also deal with

a number of American campaigns and battles, and the military policy of the United States. The changes in the conduct of war resulting from the flying machine, the submarine, wireless telegraphy, the machine gun, modern artillery and fire arms and the methods of attack and defense now being employed on the European battlefields will be pointed out and discussed.

There will be theoretical as well as practical instruction in target practice. Field Service Regulations will be studied and the use and interdependence of the different arms in the service be explained. Studies and readings from Steele: *American Campaigns;* Sargent: *Napoleon's First Campaign, The Campaign of Marengo,* and *The Campaign of Santiago de Cuba;* Upton: *Military Policy of the United States.* Junior and senior course, both terms, three hours a week. Open only to students who are attending all military drills. Major Sargent.

Surveying 302. A general outline of methods of surveying and their uses. Raymond: *Surveying.* Junior course, second term, 3 hours a week. Professor Harris.

Heat Power Engineering (Civil Engineering 401, 402). General relation of the factors of energy and power considered analytically and graphically; gas and vapor energy cycles; power, efficiency and performance of steam engines, turbines, boilers and auxiliary apparatus; fuels and combustion. Hirschfeld and Barnard; *Heat Power Engineering.* Laboratory work consisting of tests of steam engines, boilers, injectors, blowers and gas engines, is taken up in the second term, and a complete inspection of the University Power Plant is made. Both terms, 3 hours a week. Professor Dirks, assisted by Mr. Condit in the laboratory.

Physical Geography 302. Morphology of the continents.

Guyot: *Physical Geography; Earth and Man;* Davis: Physical Geography; Tarr: *Elementary Physical Geography;* Mill: *Realm of Nature.* Junior course, second term, 3 hours a week. Professor Libbey.

Honors Reading: Salisbury and Atwood: *Interpretation of Topographical Maps;* Russell: *Rivers of North America;* Russell: *Lakes of North America;* Russell: *Glaciers of North America;* Dutton: *Earthquakes;* Poulett-Scrope: *Volcanoes;* Dana: *Volcanoes;* Geikie: *Earth Sculpture.*

DEPARTMENT OF CIVIL ENGINEERING

PROFESSORS CONSTANT (CHAIRMAN), WILLSON, SMITH, HARRIS, BEGGS, AND DIRKS; MR. *MAC MILLAN.

THE FRESHMAN YEAR

English 101, 102 *c*. Two hours a week will be given to the special study and general reading of selected English authors, with frequent reports on assigned reading; the third hour to rhetoric and composition with special attention to technical writing. Both terms, 3 hours a week. Mr. Murch.

Physics 101, 102. General Physics. General course in physics, including lectures, recitations, and laboratory work. Both terms, 4 hours a week. For this course a fee of $5 is charged, and a deposit on apparatus of $5 is required. Professor McClenahan and others.

Selected Portions of Algebra 103. Undetermined Coefficients, Division Transformation, Partial Fractions, Elementary Theory of Equations, Permutations and Combinations; Review of Plane Trigonometry; Elements of Spherical Trigonometry. Fine: *College Algebra;* Hun and MacInnes: *Elements of Plane and Spherical Trigonometry.* First term, 4 hours a week. Professor Mac Innes.

Mathematics 108. Coördinate Geometry, treated from the Cartesian standpoint. Fine and Thompson: *Coördinate Geometry.* Second term, 4 hours a week. Professor Mac Innes.

Chemistry 101, 102. General Inorganic Chemistry. Experimental lectures on the elements and their compounds, supplemented by laboratory work. Two lectures, one recitation, and one laboratory exercise of 3 hours each week. Smith: *General Chemistry for Col-*

* Absent.

leges. Both terms, 4 hours a week. Professor Van Nest and others.

Engineering Drawing 101, 102. Lettering, line work, orthographic and isometric projections, freehand dimensional sketching from objects, assembly and working drawings from the freehand sketches of others in ascending order of complexity; tracing and blueprinting. French: *Engineering Drawing.* Both terms. First term, two credits a week, second term, one credit a week, of 3 hours each. Professor Dirks.

Geodesy 101, 102. Land surveying. Theory of chain and compass surveys with problem work in latitudes and departures and calculation of areas. The United States system of surveying the public lands. Leveling. Theory and adjustment of the level. Elements of topography. Lectures, recitations and office work during the second half of the first term and the first half of the second term.

Field practice. Compass survey, including all interior details and topography. Office work, calculations, and finished map including contours. Level adjustments and check levels. Completed during the second half of the second term. Gillespie-Staley: *Land Surveying.* First term, one credit, second term, two credits a week. Professors Harris and Beggs.

Personal Hygiene. Physical examinations, graded exercise. A discussion of the fundamentals of health and physical efficiency; the influence of personal habits; the use of alcohol and tobacco; and a study of the more common infectious diseases—their nature, causes, methods of transmission and prevention. The lectures will be illustrated by the use of manikins, diagrams, and lantern slides. Reference books: Hough and Sedgwick, Woodhull, and Pyle. Freshman course,

both terms, 1 hour a week. Professors Raycroft, Luehring, and Tooker.

Physical Examinations. Each student is given a careful physical examination which serves as a basis for advice as to special corrective exercises, if needed, and an opportunity for a discussion with each individual on the various practices and habits that affect his physical and mental efficiency. This examination includes a few anatomical measurements; strength tests for determining muscular efficiency; and an examination of the eyes, nose, ears, throat, and the vital organs. Professors Raycroft, Luehring, and Tooker; and Mr. Foggitt.

Graded Exercises. The work consists of a large variety of games and exercises conducted under the supervision of the department. It is graded to meet the needs and ability of those in the classes, and is conducted out-of-doors whenever possible. The student may select the squad or class with which he will work. Every freshman must pass a test in swimming. Classes are organized for beginners. Life-saving and methods of resuscitation are taught advanced classes. Required of all freshmen, both terms, 3 hours a week. Professors Luehring and Tooker; Mr. Sullivan and Mr. Foggitt.

THE SOPHOMORE YEAR

Physics 205, 206. Heat, and Electricity and Magnetism. Lectures based on experimental demonstrations. Frequent written recitations. Edser: *Heat;* Hadley: *Magnetism and Electricity.* Both terms, 3 hours a week. Professors Loomis and Robinson.

Mathematics 203, 204. Calculus. Both terms, 4 hours a week. Professor Mac Innes.

Analytical Mechanics 205, 206. Statics; equilibrium of forces, stresses in frames, centers of gravity, moments of inertia. Kinetics; of the particle and rigid body, energy and work, friction, impact. Both terms, 3 credits a week. Professor MacInnes.

Engineering Drawing 201. Continuation of Engineering Drawing 102. French: *Engineering Drawing.* First term, 2 credits of 3 hours each a week. Professor Dirks.

Graphics 201, 202. Descriptive geometry of the point, line, plane; intersections, development and model-making. Applications of descriptive geometry in engineering structures. Elementary kinematic problems. Both terms, 2 credits of 3 hours each a week. Professor Willson.

Geodesy 201. Structure and adjustment of engineer's field instruments. Theory of leveling, contouring, triangulation and stadia measurements. Problems in parting off land. Lectures, recitations, and office work. Tracey: *Plane Surveying.* First term, 3 credits a week. Professor Harris.

Geodesy 202. Railroad engineering. Theory of simple curves, mathematics and field methods with problems. Lectures, recitations and office work. Searles: *Field Engineering.* During the last two-thirds of the term surveying, field practice, adjustments of instruments, leveling, contouring, triangulation and stadia surveys. Office work mapping the surveys. Second term, 3 credits a week. Professors Harris and Beggs.

Geology 202. Elementary course. General outline of the subject, including dynamical, structural, and historical geology. Scott: *Introduction to Geology.* Reference book: Chamberlin and Salisbury: *Geology.* Second term, 3 hours a week. Professor Farr.

THE JUNIOR YEAR

Analytical Mechanics 305. Continuation of Analytical Mechanics 206. First term, 3 hours a week. Professor Constant.

Civil Engineering 301. Mechanics of materials. Strength and elasticity of materials and applications to beams, columns and shaft. Boyd: *Strength of Materials.* First term, 4 credits consisting of 3 recitations and 1 problem exercise of 3 hours a week. Professor Beggs.

Civil Engineering 302. Reinforced concrete. Mechanics of reinforced concrete beams, slabs and columns. Second term, 3 credits consisting of 2 recitations and 1 problem exercise of 3 hours a week. Professors Constant.

Civil Engineering 303, 304. Laboratory work. The work consists of a series of exercises in the testing of materials of construction in tension, compression, torsion and flexure, of specimens and full sized structural members of wood, steel, cement and reinforced concrete. A study of the elastic properties of the materials is made by the use of micrometers, extensometers, and other instruments of precise measurement, and so far as possible the laboratory is made to supplement the theoretical work in the class room in the mechanics of materials. First term, 2 credits a week consisting of 2 laboratory exercises of 3 hours each. Second term, 1 credit a week consisting of 1 laboratory exercise. Professor Smith.

Civil Engineering 306. Structural design. Elements of structural design. Design of railway plate girder. Stresses in beams, girders and simple trusses. Complete stresses for a railway truss bridge. Conkling: *Structural Steel Drafting; A. R. E. Specifications; Steel Hand Books; Blue Prints of Shop Drawings.*

Second term, 3 credits a week consisting of 2 recitations and 1 drawing room exercise of 3 hours. Professor Beggs.

Civil Engineering 307, 308. Machine Design. Motion in mechanisms, energy in machines, proportions of machine parts as dictated by stress, and the design of machine parts, such as fastenings, bearings, shafts, journals, belting, flywheels, pulleys, spur and bevel gears. Leutwiler: *Elements of Machine Design.* Both terms, 2 credits a week of 3 hours each. Professor Dirks.

Civil Engineering 310. Hydraulics. Theory of hydraulics, including the elements of the theory of water wheels. Second term, 3 hours a week. Professor Smith.

Geodesy 301. Town, mine and hydrographic surveying. Lectures, recitations and field work, extending during the first two-thirds of the term. Raymond: *Surveying.* The remainder of the term is spent upon railroad engineering. Lectures, recitations, problems and field work. Searles: *Field Engineering.* First term, 3 credits a week. Professor Harris.

Geodesy 302. Railroad and road engineering. Lectures, recitations and problems. Searles: *Field Engineering and Spiral.* Roads and Pavements. Second term, 3 credits a week. Professor Harris.

Geodesy. Summer field practice. Extended field operations and office work occupying the two weeks following the close of the second term of the junior year. Professors Harris and Beggs.

Economics 305, 306. Elements of Economics. This course will comprise the fundamental theories of economics and some of their more important applications and exemplifications, such as money, banking, transportation, international trade, and monopoly problems. One lec-

ture a week and two recitations in small groups in which special problems of importance to engineers are studied. Fetter: *Principles of Economics,* and *Source Book in Economics.* Both terms, 3 hours a week. Professors Fetter and Adriance. [Not given, 1917-1918. Becomes a senior course in 1918-1919.]

Electrical Engineering 301, 302. Applied Electricity. An outline of methods of generation, transmission and utilization of electrical energy. Principal characteristics of direct and alternating current apparatus with regard to selection, installation, testing and operation of electrical machinery. Both terms, 3 hours a week, with laboratory work. Professor MacLaren. [Given also to seniors in 1917-1918.]

THE SENIOR YEAR

The seniors are required to report at 9.00 A. M. on the Monday preceding the week in which the first term begins to engage in a railway survey and location in the vicinity of the University. They will be required to give their entire time to this work until Friday of the first week of the term, at which time all work must be completed. Seniors will be expected to be prepared for and to attend the regular classes on the following day.

Civil Engineering 401, 402. Heat Power Engineering. General relation of the factors of energy and power considered analytically and graphically; gas and vapor energy cycles; power, efficiency and performance of steam engines, turbines, boilers and auxiliary apparatus; fuels and combustion. Hirshfeld and Barnard: *Heat Power Engineering.* Laboratory work, consisting of tests of steam engines, boilers, injectors, blowers and gas engines, is taken up in the second term, and a complete inspection of the University Power Plant is made. Both terms, 3 hours a week. Professor Dirks.

Civil Engineering 403. Framed Structures. Continuation of the theory of stresses in simple trusses and the complete design of a railway truss bridge. Johnson, Bryan and Turneaure: *Modern Frame Structures,* Parts I and III. First term, 4 hours a week, consisting of 2 recitations and 2 drawing room exercises of 3 hours each. Professor Beggs.

Civil Engineering 404. Framed Structures. Deflections. Theory of steel and concrete arches, cantilever and swing bridges, steel frame buildings. Power and mechanism for movable bridges. Bridge specifications, manufacture, erection and estimate of cost. Johnson, Bryan and Turneaure: *Modern Frame Structures,* Part II. Second term, 4 hours a week consisting of 2 recitations and 2 drawing-room exercises of 3 hours each. Professors Constant and Beggs.

Civil Engineering 405. Water Power. Collection, control and use of water for power purposes; selection of water wheels; laboratory measurements of the flow of water. First term, 4 hours a week. Professor Smith.

Civil Engineering 406. Water Supply. Collection, purification and distribution of public water supplies. Optional for C.E. seniors, second term, 2 hours a week. Professor Smith.

Civil Engineering 407. Sewerage. Design of sewers; methods of treatment and disposal of sewage. Optional for C.E. seniors, first term, 2 hours a week. Professor Smith.

Civil Engineering 409. Concrete Constructions. Design of reinforced concrete structures such as foundations, bridges, viaducts, dams, retaining walls, towers and buildings. Optional, first term, 2 credits a week of 3 hours each. Professor Constant.

English 411, 412. Theme writing and public speaking. Technical reference reading, written and oral presentation of reports upon engineering projects, argumentation, oral discussion of current topics. Both terms, 2 hours a week. Professor Constant.

Geodesy 401. Railway Economics. Wellington: *Railway Location. Proceedings of the A. R. E. Association* and other reference reading. Optional, first term, 2 hours a week. Professor Harris.

Civil Engineering 410. Gas Engines. Thermo-dynamics of gas engines; gas engine cycles, fuels, ignition, carburetion, governors, cooling; various types of gasoline, gas and oil engines, gas engine design. Streeter: *Internal Combustion Engines.* Optional, second term, 2 hours a week. Professor Dirks.

SCHOOL OF ELECTRICAL ENGINEERING

FACULTY

MALCOLM MACLAREN, E.E., A.M., *Professor of Electrical Engineering, Chairman of the Department*
HOWARD MCCLENAHAN, E.E., M.S., LL.D., *Professor of Physics*
GEORGE AUGUSTUS HULETT, PH.D., *Professor of Physical Chemistry*
EDWIN FITCH NORTHRUP, PH.D., *Assistant Professor of Physics*

The course in Electrical Engineering is designed to furnish instruction in the theory of electricity and in its application in the arts and industries. The special course of study in electricity occupies two years of graduate work.

REQUIREMENTS FOR ADMISSION

Graduates of any accredited college will be admitted to the course in Electrical Engineering without examination, provided they have taken the requisite courses in mathematics, including calculus and elementary differential equations, general and experimental physics, and general chemistry. Applicants who have completed three years of college work or the equivalent may be admitted to the course upon passing satisfactory examinations in these subjects.

A reading knowledge of scientific French and German is desirable, as some of the reference books are written in those languages.

TUITION

The fee for tuition in the School of Electrical Engineering is $200 per annum.

COURSE OF STUDY

First Year

Mathematical Theory of Electricity and Magnetism. Theory of the potential; lines and tubes of force; electrostatics; dielectrics, electric images; magnetism and magnetic induction; electromagnetism; electromagnetic induction; equations of the electromagnetic field; electromagnetic theory of light; theory of alternating currents; general equations; effects of resistance, inductance and capacity; distributed capacity; the rotating field; single and polyphase currents; high frequency currents and electrical oscillations; alternating current calculations; the symbolic method. Two exercises, about five hours per week, are devoted to this work. Professor McClenahan.

Engineering Principles and Measurement. This course is planned to give instruction in the fundamental principles in science which have a direct bearing upon engineering practice. It is conducted by lectures, readings, and laboratory work. Particular attention is given to the theory of, and to practice in measuring, the electrical magnetic and thermic quantities.

In the first term the subjects cover: the theory of units, dimensions of physical quantities, concrete standards, the principles of precise measurements, the nature of oscillating systems and the standard methods of measuring; quantity of electricity, ohmic resistance, electromotive forces, electric currents and the fundamental magnetic quantities. The modern methods used for measuring the high temperatures, so commonly employed in the industries, are considered briefly in lectures and in the laboratory.

In the second term quantities subject to a rapid time variation are more particularly considered. The

instruction includes the theory of, and practice in measuring, alternating currents, reactance, impedance, capacity, inductance and power. Lectures are given upon line transmission and the relations of polyphase currents and electromotive forces.

Much importance is attached to giving the students a clear physical understanding of the phenomena treated and to developing the ability to apply their mathematical equipment to the solution of concrete and practical problems. Each student is required to devote not less than two full days a week to this course. Professor Northrup.

The Theory and Design of Direct-Current Machinery. The student is required in this course to calculate magnetization curves for a number of different types of machines, to familiarize himself with the various types of field and armature windings, and make a special study of the theory of commutation. Theoretical determinations are made upon actual commercial machines, upon which test data are available for checking results. Various tests upon direct-current machines are also made by the students during the course, and finally, each student executes a complete design including general and detail drawings, of a direct-current generator. Professor MacLaren.

During the first year an opportunity is also given to students who may be deficient in such allied subjects as Heat Engines, Strength of Materials, etc., to take suitable courses in these subjects in the Department of Civil Engineering.

Second Year

The Theory of Alternating Currents. This course embraces the mathematical theory of alternating current circuits and of alternating current machinery, including a

study of the transformer, induction machines, alternating current generators, synchronous motors and polyphase systems. Emphasis is laid on the solution of a large number of problems bearing on the theory and practice of alternating currents. The course includes also lectures on modern commercial testing practice. Two exercises a week for both terms.

Alternating Current Machinery. This is a continuation of the first year course in design and the same procedure is followed, except that the student executes designs for alternating current machines, and studies their commercial application in various industries. Two exercises a week for one term. Professor MacLaren.

Railway Engineering. This course is divided into three parts. The first part covers a theoretical study of the principles of locomotion, followed by the calculation of schedule speeds, power consumption, equivalent heating loads upon the motors, etc., for some representative line upon which the operating data are available for comparing results. In the second part, a series of lectures is given upon the different electrical systems in use upon interurban trolley roads. In the third part, consideration is given to some of the problems of heavy electric traction. Two exercises a week for one term. Professor MacLaren.

Electrochemistry. Two lectures a week are devoted to a consideration of the fundamental principles involving the mutual transformation of electrical and chemical energy, while the student is given special topics to work up and present to the class for discussion.

Two laboratory periods are devoted to work which illustrates important principles in theoretical and applied electrochemistry. The Electrochemical Laboratory is fully equipped for conductivity measurements

and measurements of ionic velocities, and the equipment includes various types of voltameters, normal and half electrodes, etc. The work done in this laboratory on standard cells with the potentiometer, constant temperature baths, etc., furnishes a most exact basis of all E. M. F. measurements and for the determination of high temperatures with thermo-couples. A study is made of types of primary and secondary batteries, electrolytic refining of metals, and electroplating. Electric furnaces of different types are provided to illustrate some of the principal processes in electro-thermics. Professor Hulett.

An extended and specialized course will be given to those who wish to devote their attention to electro-chemical engineering.

Testing. The equivalent of about two days a week during the year is set apart for testing dynamos, motors, transformers, lamps, engines and boilers. A complete plant test for an all-day run is carried out each year by the students of the School.

Collateral Lectures. Lectures are given during the second half of the year on power plant design, in which the principal electrical and mechanical features involved in the utilization of the different kinds of motive power are considered; on transmission of energy; on electric lighting, including the systems of distribution and a comparison of the different types of illuminants; and on the principles and methods of photometry. Professor MacLaren.

DEGREE

On completion of this course the student is entitled to apply for the degree of Electrical Engineer. With his application he must present a thesis on some subject connected with electrical science.

THE GRADUATE SCHOOL

The affairs of the Graduate School are administered by a committee of the University Faculty known as the Faculty Committee on the Graduate School. The Dean of the Graduate School is Chairman of this committee. All inquiries should be addressed to Professor West, Dean of the Graduate School.

Applicants who possess a Bachelor's degree from Princeton University, or from other institutions maintaining a similar standard in distinctively liberal studies for the Bachelor's degree, may be admitted to the Graduate School subject to the following regulations:

1. Admission on diploma to the Graduate School is granted to Bachelors of Princeton University whose standing for the undergraduate course is within the first three General Groups. A Bachelor of lower standing may not be admitted unless his average standing in undergraduate studies in the department of his proposed graduate work is higher than the Third Group.

2. The equivalent of this standard is expected of applicants holding the Bachelor's diploma from other colleges and universities.

3. In every case the further question of eligibility for a higher degree will be determined by the academic record of the applicant and his ascertained ability to pursue graduate studies.

No officer of instruction in the University, except an assistant or instructor on half-time appointment, or an instructor who has fulfilled the requirements as to residence prior to his appointment as instructor, may be a candidate

for any degree. The minimum residence requirement for the higher degrees will ordinarily be increased at the discretion of the Committee on the Graduate School, in the case of instructors or assistants on half-time appointment.

All graduate students, whether graduates of Princeton or of another institution, are required to apply for admission at the office of the Dean of the Graduate School before October first of each year, and those who present themselves for the first time must submit to the Dean their diplomas and such other credentials as may be required.

Immediately after admission every graduate student, including graduate students of the previous year, shall register and report his courses at the office of the Dean of the Graduate School.

FEES

Graduates of universities other than Princeton are required to pay to the Treasurer a matriculation fee of five dollars. A diploma fee of ten dollars is charged every graduate student coming up for a higher degree. Every graduate student on full time, except holders of Jacobus or Procter Fellowships, is required to pay an annual tuition fee of one hundred dollars. Every graduate student on part time, except part-time assistants in Princeton University and students in Princeton Theological Seminary, is required to pay an annual tuition fee of forty dollars.

In accordance with a reciprocal arrangement between the University and Princeton Theological Seminary, duly qualified students of either institution are admitted without charge for tuition to the privileges of the other.

No charge for laboratory fees is made to graduate students, but if any department controlling a laboratory desires to charge for expenses and certifies its desire to the Treas-

urer, a deposit, the amount of which is to be fixed by the department concerned, will be required to cover in whole or in part the expense incurred for supplies (subject to rebate in case the actual expense is less than the amount of the deposit.)

DEGREES

The following degrees are given for graduate study: Master of Arts and Doctor of Philosophy.

MASTER OF ARTS

The degree of Master of Arts may be conferred only upon those who hold a Bachelor's degree in the liberal arts and sciences from this or another approved college who shall also have devoted at least one year exclusively to resident graduate study in the University under the care of the Faculty, passing examinations upon the studies pursued; or shall have taken graduate courses in the University involving at least three hours a week each term for four terms and passed satisfactory examinations upon these courses, and on such extra reading as may be assigned. Every candidate for the Master's degree in one year is expected to take throughout the year at least three graduate courses, unless another arrangement is permitted by the Faculty Committee on the Graduate School. These courses shall be such as to form a consistent and well coördinated body of studies, and shall be subject to the approval of the Faculty Committee on the Graduate School.

Students of Princeton Theological Seminary who are enrolled in the Graduate School and maintain an average standing of not lower than Second Group in the regular course of Princeton Theological Seminary may proceed to the Master's degree if they satisfy the requirements of the University for the degree.

DOCTOR OF PHILOSOPHY

Subject to the regulations hereinafter stated, the degree of Doctor of Philosophy may be conferred upon any Bachelor of Princeton University, or of another approved institution, provided he has spent at least two years exclusively in study for the degree. It should be clearly understood that two years is the minimum period required and that in all but the rarest cases three years will be found necessary. One year must be spent in residence at Princeton.

REGULATIONS

Subject of Study. An applicant for the degree of Doctor of Philosophy chooses one of the following subjects of study:

Philosophy	English
History	Mathematics
Politics	Astronomy
Economics	Physics
Art and Archaeology	Chemistry
Classics	Biology
Romanic Languages	Geology
Germanic Languages	

The examination for the degree of Doctor of Philosophy consists of two parts, known as the First Part and the Second Part.

Before offering himself for the First Part of the examination for the Doctor's degree the applicant is expected to have acquired a broad, general knowledge of the subject which he has chosen and a comprehensive and detailed knowledge of some one main division of it. In certain cases, however, the applicant may, on the recommendation of the department in which his subject lies and with the approval

of the Faculty Committee on the Graduate School, substitute for a main division of his subject a like division of a germane subject; or he may be required to take additional work outside his subject.

Applicants for the Doctor's degree are also required to take at some time during their period of graduate study a series of public lectures on the general trend of philosophical and scientific thought, to be given, with assigned collateral reading, by a member of the Department of Philosophy.

The First Part of the Examination. The First Part of the examination for the Doctor's degree is designed to test the student's mastery of his subject of study and is to be held not earlier than toward the close of the second year of graduate study. This examination may be written or oral, or both, at the discretion of the department which gives the examination.

No applicant for the degree of Doctor of Philosophy is to be enrolled as a candidate until he has satisfactorily sustained the First Part of the examination for the Doctor's degree as described above, and has shown that he is able to use French and German as instruments of research.

In case the First Part of the examination for the Doctor's degree is not sustained, the applicant may be allowed by permission of the Committee on the Graduate School to present himself for a second trial after the lapse of at least one academic term. If this second trial is unsatisfactory, no further examination will be allowed.

A student who has sustained the First Part of the examination for the Doctor's degree is entitled thereby to be recommended for the degree of Master of Arts.

The Thesis. After the applicant has sustained the First Part of the examination and has been enrolled as a candidate for the Doctor's degree he shall present to the depart-

ment in which his work chiefly lies a thesis on some topic in the special field of his study.

The Second Part of the Examination. When the thesis has been accepted by the department, as giving evidence of high attainment and the power of independent research, the candidate proceeds to the Second Part of the examination for the Doctor's degree. This is a public oral examination in the field of the thesis and the more comprehensive aspects of the subject of study, and may not be divided.

Granting of the Degree. The Doctor's degree will be granted only after the First Part of the examination for the Doctor's degree has been sustained, the thesis accepted, the Second Part of the examination for the Doctor's degree sustained, and arrangements for publication of the thesis completed by the candidate and approved by the Committee on the Graduate School.

One hundred copies of the printed thesis must be deposited in the University Library.

THE GRADUATE COLLEGE BUILDINGS

The buildings of the Graduate College were completed in September 1913. This group of buildings consists of Thomson College, the gift of the late Mrs. J. R. Thomson Swann; Procter Hall, the gift of William Cooper Procter of the Class of 1883 in memory of his parents; Pyne Tower, the gift of M. Taylor Pyne of the Class of 1877; Wyman House, contributed by the Estate of Isaac C. Wyman of the Class of 1848; and the Cleveland Memorial Tower in memory of President Grover Cleveland (hon. 1897), erected out of popular contributions collected by the Cleveland Monument Association.

The endowments of the Graduate College include the fellowship fund of $300,000 given by Mr. Procter and the bequests under the will of Mr. Wyman.

RESIDENCE IN THE GRADUATE COLLEGE

The object of the Graduate College buildings is to provide a suitable place of residence for graduate students, where they may have the full advantage of a common life in scholarly surroundings. In order that the privileges of these buildings may be generally available, the prices of residence have been fixed at a minimum cost, so that it will be possible to live there for less than the amount which would usually have to be paid in the village of Princeton. Certain rooms will be reserved particularly for the Jacobus and Procter Fellows, and the other Fellows are expected ordinarily to reside in the building. Rooms at minimum prices will be reserved for students who do not hold fellowships. The capacity of the building is 108 students.

All applications for admission to residence in the buildings of the Graduate College should be addressed to the Dean of the Graduate School, Princeton University, Princeton, New Jersey. Application blanks will be forwarded on request.

At the time the application blank is filled out each year and sent to the Dean of the Graduate School, a deposit of ten dollars should accompany each application in the form of a cheque, New York draft or money order made payable to the *Treasurer of Princeton University.* This deposit will be credited against the student's bill for residence. In case the application is not granted, this fee of ten dollars will be refunded, but will not be returned in case the application is granted, except as above stated.

Application for residence may be made at any time. So far as practicable, the rooms will be assigned in the order of application and in the order of preference indicated on the application blank. Subsequent changes of rooms will be allowed for good reasons, whenever possible. *Unless other-*

wise definitely arranged, the reservation of rooms is for one academic year of thirty-six weeks, including the Thanksgiving Recess and the Easter Recess, but not including the Christmas Vacation.

The buildings will be open for occupancy by graduate students at the beginning of the next academic year, Tuesday, September 25, 1917. The service of meals will begin that evening. Baggage and other effects of graduate students admitted to residence may be sent to the buildings as early as Saturday, September 22, 1917.

In case of extended absence or withdrawal from residence in the Graduate College, requests for deductions are to be made to the Treasurer of the University. No deductions are made for temporary absence.

The prices charged for residence in the Graduate College include furnished rooms, light, heat, attendance, and board, but not personal laundry. The rooms are divided into six groups, with the following present total charges to graduate students, assistants, and instructors, for the academic year of thirty-six weeks:

Group I		$300.00
Group II		$330.00
Group III		$350.00
Group IV	Single	$390.00
	Double	$370.00
Group V		$420.00
Group VI		$480.00

The average weekly residential cost to the student thus ranges from $8.33 in Group I to $13.33 in Group VI. One person occupying a double suite alone is charged two-thirds of the price for two occupants. Arrangements for members of the Faculty, other than instructors who desire

to reside in the Graduate College, are made at an advance over the graduate students' rates.

Graduate students rooming outside may be admitted to the table and other privileges of the Graduate College, except residence, at a charge of $230.00 for the academic year. Graduate students of the University who are not at the table nor resident in the buildings are invited to avail themselves of the other privileges of the Graduate College. Coupon books for occasional meals are furnished at a moderate cost for the use of the members of the Faculty, the graduate students, and their invited guests, and the Trustees and alumni of the University.

FELLOWSHIPS

I. UNIVERSITY FELLOWSHIPS

These fellowships were founded by subscription and endowment and are intended to encourage advanced study and promote original research in the several departments to which they are assigned. They are distinguished from the college fellowships by being open to the graduates of any American college, while the appointments are made, not by competitive examination, but by a comparison of the records presented by the applicants as to their previous collegiate standing, capacity, and character.

The University fellowships are subject to the following regulations:

1. A Fellow must devote himself to study under the direction of the department in which the fellowship is provided. But any Fellow resident in Princeton may be called upon occasionally to give instruction in his department.

2. A Fellow is not ordinarily permitted to give private tuition.

3. The fellowships are to be held for one year, but in cases of special merit they may be continued for a longer period by recommendation of the department and sanction of the Faculty.

4. The candidates shall be graduates possessing a satisfactory Bachelor's diploma in liberal studies from an accredited American college. An application should be accompanied with evidence of the qualifications of the applicant to pursue an independent course of study and investigation in the department concerned.

5. Appointment shall be made by the Faculty upon recommendation of the professors in the department interested and of the Faculty Committee on the Graduate School, and shall be announced at Commencement.

6. All requests for fellowship or scholarship application blanks shall be addressed to the Dean of the Graduate School and all applications should be in the hands of the Dean of the Graduate School on or before March 1, the appointees to hold their positions for a year from the following September. Applications received later than March 1 may be considered in special cases, and to fill vacancies.

CLASSES OF UNIVERSITY FELLOWSHIPS

The University Fellowships are divided into two classes, the advanced and the ordinary.

The advanced fellowships include the Jacobus Fellowship and the ten Procter Fellowships. They have an annual stipend of one thousand dollars each, exempt from charge for tuition, and are assigned only to graduate students of at least one year's standing who have given evidence of unusual ability in their graduate work and capacity to engage successfully in research.

The ordinary fellowships regularly have a stipend of six hundred dollars on first appointment, and of seven hundred dollars on re-appointment, subject to the charge of one hundred dollars for tuition. The number of these fellowships is approximately thirty-five and varies slightly from year to year. Sixteen of them are wholly or partly endowed and the funds needed to supplement the partly endowed fellowships and to add others are derived from University appropriations.

ADVANCED FELLOWSHIPS

PORTER OGDEN JACOBUS FELLOWSHIP

Established in 1905 by the generosity of Mrs. Clara Cooley Jacobus. This fellowship will be conferred upon that regularly enrolled student of the Graduate School who, in the judgment of the University Faculty, shall have evinced the highest scholarly excellence in his graduate work during the year. The appointee to this fellowship receives the income from an endowment of $25,000 and is expected to devote himself exclusively to study under the direction of the Faculty.

THE CHARLOTTE ELIZABETH PROCTER FELLOWSHIPS

These fellowships are established on an endowment of three hundred thousand ($300,000) dollars, given in memory of Charlotte Elizabeth Procter by her son. The terms of the fellowships are as follows:

1. The fellowships shall be known as The Charlotte Elizabeth Procter Fellowships, and the holders thereof shall be exempt from tuition fees.

2. The fellowships are open only to unmarried men who are graduates of not more than six years' standing and who hold the Bachelor's degree in distinctively liberal studies from Princeton University or from some other institution maintaining a similar standard for the Bachelor's degree.

3. Appointment is to be made by vote of the University Faculty on nomination by the Dean of the Graduate School after consultation with the full professors in the department interested.

4. The tenure of each fellowship is one academic year, subject to re-appointment of not more than two years

longer, except on evidence of extraordinary ability and upon unanimous vote of the University Faculty.

5. The fellowships are not to be allocated to separate departments but are open to all the departments conducting graduate work in the liberal arts and sciences.

6. Every Fellow appointed on this Foundation shall reside in the buildings of the Graduate College, unless dispensed therefrom by the Dean of the Graduate School, and shall devote himself to advanced study to the exclusion of tutoring, teaching, lecturing or any other occupation or employment.

7. In case the conduct or work of any Fellow is unsatisfactory, the tenure of his fellowship may be terminated by the University Faculty.

8. The stipend of each fellowship shall be one thousand ($1,000.00) dollars annually, and no fellowship may be divided.

9. The income of the Foundation is to be applied to maintaining as many fellowships, each yielding one thousand ($1,000.00) dollars annually, as eighty per cent of the income will warrant. All income in excess of eighty per cent shall be applied first, to maintaining the principal of the Foundation, and then to re-investment for the purpose of increasing the stipend of the fellowships in amounts of one hundred ($100.00) dollars each, as rapidly as eighty per cent of such re-investment will permit.

PROVIDED, HOWEVER, that whenever the stipend of such fellowships amounts to fifteen hundred ($1,500.00) dollars each per year, thereafter no further increase in the stipend shall be made, but additional fellowships of fifteen hundred ($1,500.00) dollars shall be founded as rapidly as said eighty per cent of such re-investment will allow. All excess of income remaining at the end of each fiscal year is to be applied to the increase of the capital fund.

ORDINARY FELLOWSHIPS

J. S. K. MATHEMATICAL FELLOWSHIP FUND

This fund was founded in 1873 by a resident of New York City, who gave $11,000 for the purpose. Through accumulations of interest it now amounts to $24,150. In accordance with the deed of gift, the income from this fund is to be "used exclusively for University fellowships in the Department of Mathematics." One Fellow in mathematics will be appointed each year. Frequently a second Fellow may be appointed. Appointments will be made on the basis of the records presented by the applicants as to their previous collegiate standing, capacity, and character. In addition, in the case of resident students, a competitive examination may be held in June on geometry, differential equations, and the theory of functions.

SOUTH EAST CLUB UNIVERSITY FELLOWSHIP IN SOCIAL SCIENCE

This fellowship, which has a fund yielding $500 per annum, was founded by alumni of the classes of '76, '77, '78, and '79, former residents of the South Entry of East College.

CLASS OF 1877 UNIVERSITY FELLOWSHIP IN BIOLOGY

This fellowship has an endowment yielding $400 per annum.

CHARLES SCRIBNER UNIVERSITY FELLOWSHIP IN ENGLISH LITERATURE

This fellowship, which has an endowment yielding $500 per annum, was founded in memory of Charles Scribner, of the Class of 1840, by his son, Charles Scribner, of the Class of 1875.

THAW FELLOWSHIP IN ASTRONOMY

This fellowship, which has an endowment of $10,000, was founded by Mrs. William Thaw.

JOHN HARDING PAGE CLASSICAL FELLOWSHIP

This fellowship was established in 1900 by Mrs. James Laughlin, Jr., as a memorial to her father, Mr. John Harding Page. It is conferred by appointment of the Faculty and has an endowment of $10,000.

FRANCIS HINTON MAULE BIOLOGICAL FELLOWSHIP

This fellowship was founded in 1901 by Mr. and Mrs. Francis I. Maule as a memorial to their son, Francis Hinton Maule, who was a student in the University during the years 1895-98. It is conferred by appointment of the Faculty and has an endowment of $10,000.

CLASS OF 1860 EXPERIMENTAL SCIENCE FELLOWSHIP

This fellowship was founded in 1870 upon the sum of $10,000 subscribed by the Class of 1860. A deficiency of income, resulting from the depreciation of the value of the securities in which the principal was invested and the lowering of the rate of interest, is paid, by the consent of the donor, from the income of the Magee Professorship of Mining and Engineering, founded by George J. Magee, of the Class of 1860. By action of the Board of Trustees, taken in 1904, this fellowship was constituted a University Fellowship, to be administered, under the regulations governing the administration of such fellowships, by the Departments of Physics and Chemistry.

HARVARD FELLOWSHIP IN CHEMISTRY

Founded in 1905 by the generosity of one of the Fellows of Harvard University, with an endowment of $10,000.

GORDON MACDONALD FELLOWSHIP

This fellowship, at present unassigned to any department, was established in 1908 by Mr. James Speyer as a memorial to his friend and partner, Gordon Macdonald. The endowment yields about $500 annual income.

ORSON DESAIX MUNN UNIVERSITY FELLOWSHIP IN ELECTRICAL ENGINEERING

This fellowship was established in 1908 as a memorial to Orson Desaix Munn by his son, Charles A. Munn, of the Class of 1881, and Mrs. Henry Norcross Munn. It is awarded to the applicant who has made the best record in undergraduate work in Princeton, or other accredited college, and who shows the highest qualifications in respect to those subjects which are directly preparatory to the course in Electrical Engineering. It is conferred by appointment of the Faculty, upon recommendation by the School of Electrical Engineering, and pays the holder the income of $10,000. All applications must be in the hands of the School of Electrical Engineering before April 15.

BOUDINOT HISTORICAL FELLOWSHIP

This fellowship, founded in part upon a bequest of Dr. Elias Boudinot, of New Jersey, was constituted a University Fellowship in 1909. The income from the endowment is $200.

BOUDINOT MODERN LANGUAGE FELLOWSHIP

This fellowship, founded in part upon a bequest of Dr.

Elias Boudinot, of New Jersey, was constituted a University Fellowship in 1909. The income from the endowment is $200.

CLASS OF 1883 UNIVERSITY FELLOWSHIPS

In June, 1910, the Class of 1883 contributed the sum of $30,000 to establish two University Fellowships with an income of not less than $600 each; the two fellowships to be awarded by preference in the Departments of Politics, Physics, Chemistry, Biology or Geology.

II. COLLEGE FELLOWSHIPS

Besides the degrees and honors conferred in the regular undergraduate course, annual fellowships, competitive scholarships, and prizes are offered as special incentives to study, in the classes or departments with which they are connected.

Only matriculated students who are candidates for a degree are admitted to the competition for these fellowships, prizes, and scholarships, and no one is admitted to such competition who has failed to pass satisfactorily his last preceding examination in any of the departments.

No member of any class is allowed to compete for more than one of the fellowships or scholarships offered to that class.

Every competitor must have been a member of the University in full standing for at least two academic years previous to the fellowship examinations.

Every Fellow obtaining one of the competitive fellowships the income of which is $400 or over must devote his whole time for one year to study in the department for which the fellowship is provided, under the direction of the

professors in that department. He must reside in Princeton, unless by a vote of the Faculty he be allowed to study at an approved foreign university, in which case he shall from time to time furnish written reports of his work to the professors in his department. The result of every examination and the reports of work done abroad shall be immediately returned to the Faculty. Any Fellow, resident in Princeton, shall when called upon perform such duties in the department to which he belongs as may be assigned to him by the President at the request of the professors in that department.

CHANCELLOR GREEN MENTAL SCIENCE FELLOWSHIP

This fellowship, originally founded in 1870 upon the annual payment of $600 by the late Chancellor Henry W. Green, was permanently endowed in 1878 by a gift of $10,000 by his widow. This fellowship is open to any member of the senior class who graduates. It is awarded, subject to the approval of the Faculty, by the full professors of the Department of Philosophy and Psychology.

CLASS OF 1873 FELLOWSHIP IN ENGLISH LITERATURE

This fellowship was established in 1908 by the Class of 1873. It pays the holder the income of $15,000, and is open to any member of the senior class of Princeton University who graduates. It is awarded, subject to the approval of the Faculty, by the decision of the full professors of the English Department, either (1) upon a competitive examination, or (2) upon general excellence of the work done in English during junior and senior years. The purpose of the donors is to promote the study of English literature in itself and in relation to the literatures of the world, ancient and modern.

THE E. M. BIOLOGICAL FELLOWSHIP

This fellowship conveys the use of a table in the Laboratory of the U. S. Bureau of Fisheries at Woods Hole, Mass., together with all the facilities afforded for the collection and study of animal life during the season favorable for such investigations. The fellowship is conferred by appointment of the Faculty.

SAYRE FELLOWSHIP IN APPLIED CHEMISTRY

This fellowship was founded by the bequest of the late Dr. John Stanford Sayre, of the Class of 1878, and its endowment yields an income of $600 per annum. It will be awarded to that member of the senior class in Princeton University who shall pass the best examination in general chemistry, one year of qualitative analysis, one year of quantitative analysis, and general physics. The examination will be held about June first.

SAYRE FELLOWSHIP IN APPLIED ELECTRICITY

This fellowship was founded by the bequest of the late Dr. John Stanford Sayre, of the Class of 1878, and its endowment yields an income of $600 per annum. It will be awarded to that member of the senior class in Princeton University who shall pass the best examination in general physics, general chemistry, and mathematics, including elementary differential equations. The examinations will be held in Princeton on or about June first. The holder of the fellowship will be required to devote his entire time to work under the direction of the School of Electrical Engineering.

Applications for this fellowship should be made to the School of Electrical Engineering.

III. GRADUATE SCHOLARSHIPS

A number of graduate scholarships yielding respectively two hundred and fifty dollars and one hundred dollars each, subject to the charge of one hundred dollars for tuition, are maintained by university appropriation. They are awarded by the Faculty, on the basis of scholarships, upon the recommendation of the Professors in the several departments and of the Faculty Committee on the Graduate School. There are also the following endowed graduate scholarships:

JAMES W. QUEEN GRADUATE SCHOLARSHIP

This scholarship was founded in 1908 with a bequest of $5,000, by Mrs. Abby S. Queen. By action of the Faculty it has been assigned to the Department of Physics. The incumbent of the scholarship shall be a regularly enrolled graduate student of the University, who is doing the principal part of his work in the Department of Physics. Applications for this scholarship should be made to the chairman of the Department of Physics.

THEODORE CUYLER GRADUATE SCHOLARSHIP

This scholarship was founded by the late C. C. Cuyler, of the Class of 1879, and was constituted as a graduate scholarship in 1909. It pays the holder $300, less the charge of one hundred dollars for tuition.

NOTE.—The stipends of all fellowships and graduate scholarships are paid in four equal installments, ordinarily in October, January, March, and June.

GRADUATE COURSES OF INSTRUCTION

Any graduate course announced in the catalogue will be given, if applied for by any duly qualified graduate student.

The courses which are open to *graduate students only* are as follows:

PHILOSOPHY AND PSYCHOLOGY

PHILOSOPHY

A. Critical and Historical Survey of the general trend of philosophical and scientific thought. A course of lectures, one hour a week from January to April, with assigned collateral reading. Required of all candidates for the degree of Doctor of Philosophy. Professor Fite.

501, 502, The Philosophy of Kant. *The Critique of Pure Reason* will be read and systematically discussed. Occasional lectures will also be given. Both terms, 3 hours a week. Professor Whitney.

503. The Historical Method in Philosophy. A study of its origins and influence. First term, three hours a week. [1918-1919.] †Professor Kemp Smith.

504. The Philosophy of Kant. The *Critique of Practical Reason,* and the *Critique of Judgment* will be read and systematically discussed. Second term, 3 hours a week. [1918-1919]. †Professor Kemp Smith.

507, 508. The Philosophy of Plato, with collateral reading in the works of Aristotle. Both terms, 3 hours a week. †Professor Bowman.

509, 510. The Speculative Movement in Germany between 1794 and 1831, with special reference to the philosophy of Hegel. Both terms, 3 hours a week. [1918-1919.] †Professor Bowman.

† Absent.

525, 526. English Empiricism. An exposition and critical consideration of the theories of Locke, Hume, J. S. Mill, Spencer and Lewes, with particular reference to their postulates, methods, and results. Both terms, 3 hours a week. [1918-1919.] Professor Whitney.

521, 522. Nineteenth-Century Philosophy. A developmental and comparative study of German, British, and French philosophic thought during this period, with special reference to the transcendental and positive viewpoints. Lectures, readings, and papers. Both terms, 3 hours a week. Professor Longwell.

523, 524. Mediaeval Philosophy. Lectures, reading of sources, papers. The philosophy of this period will be considered in relation to Hellenic and Hellenistic ideas and the developing culture, and in its bearing upon later thought. Both terms, 3 hours a week. [1918-1919.] Professor Longwell.

517, 518. The Logical Structure of Philosophical Systems. A study of the principles of method and of the "material" postulates upon which the main philosophical positions depend. An analytical and comparative study of tendencies and systems, especially Idealism, Phenomenalism, Naturalism and Pragmatism, and Neo-Realism. Both terms, 3 hours a week. [1918-1919.] Professor Spaulding.

519, 520. The Philosophy of Evolution. A general survey of evolutionary theory in various fields, and a critical study of its philosophical implications and limitations. Both terms, 3 hours a week. Professor Spaulding.

527, 528. Idealistic Theories of Reality. Reading and systematic discussion of the works of representative

thinkers. Both terms, 3 hours a week. [1918-1919.] Professor Johnson.

529. Contemporary Tendencies in Philosophy. This course will offer a survey of contemporary pragmatism, realism and idealism. First term, 3 hours a week. Professor Johnson.

530. Idealistic Theory in its Relation to Special Problems of Nature and the Self. Second term, 3 hours a week. Professor Johnson.

513, 514. The Conception of Consciousness. A study of the nature and significance of consciousness based upon a critical review of recent philosophical theories. Both terms, 3 hours a week. [1918-1919.] Professor Fite.

515, 516. The History of Ethics. A study of the more important ethical theories from Plato to the present time, based upon a reading of the sources. Both terms, 3 hours a week. Professor Fite.

PSYCHOLOGY

505, 506. Theory and Methods of Experimental Psychology. Lectures on the fundamental principles of psychophysical experimentation, with demonstrations. Conferences and minor laboratory problems. Both terms, 3 hours a week. Professor Warren.

511, 512. Research in Experimental Psychology. Conferences, laboratory technique, and investigations. Students with sufficient training are assigned original research problems. About 9 hours of laboratory work weekly. Both terms, 3 hours a week. Professor McComas.

531. Physiological Psychology. A course dealing primarily with the structural basis and physiological correlates

of conscious processes. Lectures, demonstrations, and reports. First term, 3 hours a week. Dr. Morgan.

532. Abnormal Psychology. Lectures and discussions. Reports on recent psychopathological literature. Clinical demonstrations in visits to the State Hospital for the Insane. Second term, 3 hours a week. Dr. Morgan.

534. Psychopathology. A study of abnormal constitutional types, fundamental reactions, and symptom-complexes. Lectures, and clinical demonstrations at the Trenton State Hospital. Second term, 3 hours a week. Dr. Cotton.

PSYCHOLOGICAL SEMINARY. Conducted by reading, theses, and discussions. Topic to be determined in consultation with the class. Open to graduate students in philosophy and psychology. Both terms. Professor Warren.

For undergraduate courses in Philosophy and Psychology also listed as graduate courses, see page 300.

HISTORY AND POLITICS

The graduate work offered by the Department of History and Politics consists of: (1) Starred lecture courses, (2) Graduate seminaries, and (3) Graduate reading courses.

(1) *Starred lecture courses.* Certain senior elective courses, marked with a star in the preceding pages, may be counted as graduate courses by students having written authority from the chairman of the department. In every instance, however, the student will be required to follow a special course of reading in connection with the lectures, and to pass a written examination prepared especially for

him. The purpose of these courses is to furnish instruction in subjects in which the student needs further training to fit him for the more advanced graduate work. Undergraduate courses 401 to 410 inclusive are to be regarded as starred lecture courses within the meaning of this definition.

(2) *Graduate seminaries.* Graduate seminaries are specialized courses designed to introduce students to methods of research, and to familiarize them with the use of primary sources. Their purpose is the training of professional students of History and Politics.

(3) *Graduate reading courses.* Graduate reading courses are courses planned to give the student a wide acquaintance with the literature and general scope of the various divisions of History and Politics.

The following outline will indicate the arrangement of graduate seminaries and reading courses.

SECTION A, HISTORY

Division I. (1) Ancient and Classical History. (For the present a reading course is offered.) Professor Abbott.

Division II. Mediaeval History. (a) Seminary, Professor Munro. (b) Reading courses, Professor Munro.

Division III. Modern History. (1) General European. (a) Seminary, Professor Robinson. (b) Reading course, Professor Shipman. (2) American History. (a) Seminary, Professor Wertenbaker. (b) Reading course, Professor Myers. [Not given, 1917-1918]. (3) English History. (a) Seminary, Professor Munro. (b) Reading course, Dr. Tyler. [Not given, 1917-1918].

SECTION B, POLITICS

Division I. Government. Seminary, Professor Ford. Reading course, Professor Ford.

Division II. Administration. Seminary, Professor Corwin. Reading course, Dr. Magruder. [Not given, 1917-1918.]

Division III. Constitutional Law. Seminary, Professor Corwin. Reading course in Legal Philosophy, Professor Fritts. [Not given, 1917-1918].

Division IV. International Law and Diplomacy. Reading course in Theory and Practice of Diplomacy, Professor Brown.

Division V. Greek Politics. Seminary, Professor Capps. (No reading course is offered.)

Division VI. Roman Law. Seminary, Professor Westcott. (No reading course is offered.)

Division VII. Roman Politics. Seminary. (Second term only.) Professor Abbott.

Students devoting all or most of their time to graduate study in the University, and specializing in History, are expected normally to center their work about one of the divisions of the History section, taking the seminary of that division throughout their period of residence in the University.

Students devoting all or most of their time to graduate study in the University, and specializing in Politics, are expected normally to elect the seminaries of the Politics section under the advice of the professor in charge of a seminary of that section.

A student in either of the above classes is expected normally to take each year, in addition to a seminary, two reading courses, one and only one of which may lie within the section to which he belongs.

Any such student may also, at the suggestion of the professor in charge of the seminary to which he belongs, be required to take work in Economics or other branches outside the Department of History and Politics.

The following is an example of the normal course of a student specializing in American History.

I. The seminary in American History.
II. One reading course each year selected from the divisions of Section A.
III. One reading course each year selected from the divisions of Section B.

Students devoting less than one half of their time to graduate work in the University are expected normally to center their work about the starred lecture courses or the reading courses. They may, however, enter the seminaries, upon furnishing to the professor in charge satisfactory evidence of their preparation, and of their ability to devote the requisite time.

Seminary Courses

The subjects which will be treated in the various seminaries in History and Politics will be announced each year for the year following. Those listed below, with the exception of 507-508 *b*, 507-508 *c*, 529, 530, and 534 *b*, are offered for the year 1917-1918.

505, 506. Mediaeval History. The First Crusade and the Latin Kingdom of Jerusalem. Three hours a week throughout the year. Professor Munro.

507, 508 *a*. Modern European History. The Revival of Learning. A study of the intellectual content of the fourteenth and fifteenth centuries in Europe, with special reference to the literature and art of Italy.

Three hours a week throughout the year. Professor Robinson.

507, 508. *b.* Modern European History. The Protestant Reformation. A study of the economic and doctrinal elements of the Reformation in Europe during the sixteenth century. Three hours a week throughout the year. [Not given, 1917-1918. Alternate with 507, 508 *a* and *c.*] Professor Robinson.

507, 508 *c.* Mediaeval France. A research course dealing with the sources of the history of France during the fourteenth and fifteenth centuries. Three hours a week throughout the year. [Not given 1917-1918. Alternate with 507, 508 *a* and *b.*] Professor Robinson.

509, 510. American History. History of the United States from 1850 to 1916. Three hours a week throughout the year. Professor Wertenbaker.

511, 512. English History. Studies in the political, economic, religious and social history of England from 1350 to 1832, arranged in a three year cycle. The course in 1917-1918 will extend from 1485 to 1660. Three hours a week throughout the year. Professor Munro.

514. Diplomatics. Study of the scripts and forms of mediaeval documents. The course will be mainly a practice course concerned with actual documents or facsimiles in the possession of the University Library. Second term, 3 hours a week. Dr. Van Hoesen.

519, 520. Government. Representative Government; its origin, its characteristics and its institutions. The first term is devoted to the history of representative government, discussing the theories that have been offered as to its genesis and tracing the course of its development. The second term is devoted to a study of exist-

ing forms of representative government from the standpoint of practical efficiency, with particular attention to the States of our own federal union and the self-governing commonwealths of the British Empire. Three hours a week throughout the year. Professor Ford.

521, 522. Problems of Administration. The methods of administration employed in each of the three branches of the national government, legislative, executive, and judical, will be subjected to examination for the purpose of determining the extent to which they represent correct principles and give satisfactory results in practice. Students will be required to do reading in the special literature of the subject and to prepare and present reports. Three hours a week throughout the year. Professor Corwin.

523, 524. Constitutional Law and Theory. Ordinarily the first year's work in this field comprises the starred lecture courses (Politics 409, 410) and certain additional work. In the seminary proper a more particular investigation is undertaken of the origin and development of the leading doctrines of American Constitutional Law and Theory and of Administrative Law. Three hours a week throughout the year. Professor Corwin.

529, 530. Greek Politics. (Classics, 513, 514.) The first term will deal with Aristotle's *Athenian Constitution*. In addition to the interpretation of the text, extensive collateral reading will be assigned in the historians and in Plutarch. Topics in Athenian constitutional history and political institutions will be assigned for report, and members of the course will be encouraged to undertake original studies in these fields. The sec-

ond term will deal with Aristotle's *Politics,* and will constitute an introduction to the political and economic writings of Aristotle, and to the social and political thought of Greece. There will also be extensive readings in Plato's *Republic* and *Laws.* Three hours a week throughout the year. Professor Capps. [1919-1920.]

534 *a.* Roman Politics. (Classics 572.) The Roman provinces. An analysis of the Roman imperial policy and of the methods by which the provinces were acquired and held, followed by a study of the Roman system of government and taxation in the provinces, of social and political conditions in the cities, and of municipal government under the empire. The course will be based mainly on the inscriptions, on Cicero's orations against Verres and his letters from Cilicia, and on Pliny's correspondence with Trajan. Second term, 3 hours a week. Professor Abbott.

534 *b.* Roman Politics (Classics 574.) Research course in Roman politics. The political history of the years 62-57, 49-48, and 44-43 B.C. will be studied from the sources; the careers of the leading politicians of those years will be followed, and the characters and purposes of the several political parties will be examined. Second term, 3 hours a week. Professor Abbott. [1919-1920.]

Reading Courses

The reading courses for the year 1917-1918 are as follows:

I. HISTORY

535, 536. The History work will be divided between Ancient Oriental History, Greek History, and Roman

History. Students will report to Professor Abbott at the beginning of the year. Three hours a week throughout the year.

537, 538. Mediaeval History of Civilization. Three hours a week throughout the year. [Combined, 1917-1918, with 507, 508.] Professor Robinson.

539, 540. The General History of Modern Continental Europe. Students reading in the History of Modern Continental Europe will be under the charge of Professor Shipman. Three hours a week throughout the year.

541, 542. American History. Students reading in American History will be under the charge of Professor Myers. Three hours a week throughout the year. [Not given, 1917-18.]

543, 544. English History. Students reading in English History will be under the charge of Dr. Tyler. Three hours a week throughout the year. [Not given, 1917-1918.]

553, 554. Byzantine History. The Byzantine Empire and civilization from their beginnings under Constantine the Great to the close of the reign of Heraclius (324-641). A study of the transition period between the end of the old Roman Empire and the complete formation of Byzantinism in the seventh century. Special attention will be given to the reign of Justinian, and to the literature and art of the times. Three hours a week throughout the year. Dr. van den Ven.

II. POLITICS

545, 546. Political Institutions. Students reading in Political Institutions will be under the charge of Professor Ford. Three hours a week throughout the year.

547, 548. Legislation and Administration in the United States. Students reading in Administration will be under the charge of Dr. Magruder. Three hours a week throughout the year. [Not given, 1917-18.]

549, 550. Legal Philosophy. An effort is made to examine a large number of the masterpieces of philosophical and political thought from earliest times as they bear on legal and political problems. Three hours a week throughout the year. Professor Fritts. [Not given, 1917-18].

551, 552 *a*. Theory and Practice of Diplomacy. A study of the rules of diplomacy and of their applications, with practical work in diplomatic correspondence and the discussion of diplomatic situations. Thesis required. First term, three hours a week. Professor Brown.

551, 552 *b*. International Arbitration. An analytical study of the arguments and decisions of the Hague Arbitration Cases. Thesis required. Three hours a week throughout the year. [Not given, 1917-1918.] Professor Brown.

PREPARATION FOR GOVERNMENT SERVICE

The following courses are suggested for those preparing for the diplomatic, consular, and insular services. Courses in French, German, and Spanish are also available.

303. Politics. Constitutional Government. Professor Willoughby. (Junior course.)

304. Politics. Elements of Jurisprudence. Professor Willoughby. (Junior course.)

405. Politics. Municipal Government. Professor Ford. (Senior course.)

406. Politics. Federal and State Government. Professor Ford. (Senior course.)

407. Politics. International Law. Professor Brown. (Senior course.)

409, 410. Politics. Administrative Law. Professor Corwin. (Senior course.)

411. European Economic Policy. Professor McClellan. (Senior course.)

551, 552. Politics. Theory and Practice of Diplomacy. Professor Brown. (Graduate course.)

403, 404. History. American History. Professors Myers and C. R. Hall. (Senior course.)

305, 306. Elements of Economics. Professor Fetter. (Junior course.)

409. Economics. Money and Banking. Professor Kemmerer. (Senior course.)

ECONOMICS AND SOCIAL INSTITUTIONS

501. Economic Principles. A systematic review of the theory of value and of the fundamental problems in the theory of distribution. Open to first year graduate students. Fetter: *Economic Principles.* First term, 3 hours a week. Professor Fetter.

503, Monetary and Banking History of the United States. the period covered is from 1789 to the resumption of specie payments in 1879. A seminary course based chiefly upon source materials. In addition to the general work of the course each student is required to make an intensive study of some special topic and to give a report upon it to the seminary. First term, 3 hours a week. Professor Kemmerer. [1918-1919.]

507. Labor Problems and Labor Organizations. An examination of present-day labor problems, followed by an intensive study of the history, policies, and influence of trade unions, especially in the United States.

First term, 3 hours a week. Professor McCabe. [Not given, 1917-18.]

508. Labor Legislation. A study of the legislative measures in this and other countries for the amelioration of the condition of the industrial classes. Second term, 3 hours a week. Professor McCabe. [1918-1919.]

509. The Organization of Industry. An examination of the growth of large industry, and of trusts and combinations. First term, 3 hours a week. Professor Knauth. [Not given, 1917-18.]

511. Accounting. The course will be devoted chiefly to municipal accounting, including budget making and related subjects of municipal finance. First term, 3 hours a week. [Not given, 1917-18.] Professor Bauer.

512. Regulation of Public Service Corporations. The course will include a study of the economic and legal nature of public service corporations, methods of public rate-making, and the control of return on investment. Second term, 3 hours a week. Professor Bauer. [Not given, 1917-18.]

514. Statistics. A study of statistical method with practical work in tabulation and interpretation. Attention is given both to population statistics and to economic statistics. Second term, 3 hours a week. Professor Adriance. [Not given, 1917-18.]

515. Taxation. Principles and problems of taxation with some attention to public expenditures. Emphasis will be placed upon American problems. First term, 3 hours a week. Dr. Young. [Not given, 1917-18.]

518. Insurance. An examination of the essential principles of insurance, with particular reference to the mathematical aspects, the business management, and the

government regulation of life insurance. Second term, 3 hours a week. Professor Carothers. [Not given, 1917-18.]

527. Money. A study of the principles of money as exemplified in certain modern currency reforms. For this year reforms studied will be those of India, Mexico, the Philippine Islands, Porto Rico. First term, 3 hours a week. Professor Kemmerer.

528. Banking. A study of present day banking conditions and problems in the United States. Particular attention is given to the Federal Reserve system, and this is studied in the light of modern European banking experience. Second term, 3 hours a week. Professor Kemmerer.

532. The Theory of Distribution. An examination of the sources and beginnings of distributive theory in the light of the contemporary economic and political conditions; concluding with the most recent discussions and solutions. Second term, 3 hours a week. Professor Fetter.

534. The Terminology of Economics. Origin and growth of the leading economic concepts; concluding with an examination of the present divergent usage and constructive criticism looking toward a positive and systematic terminology. Second term, 3 hours a week. Professor Fetter. [1918-1919.]

SEMINARY IN ECONOMICS. The graduate students, candidates for degrees, will meet from time to time with the members of the Faculty to discuss theses in progress. No registration is required.

READINGS IN GERMAN AND FRENCH ECONOMISTS. A study of some of the leading works for the purpose

of affording practice in the use of these languages for scientific study. One hour a week, optional, each term. Professor Fetter.

For undergraduate courses in Economics also listed as graduate courses, see page 300.

ART AND ARCHAEOLOGY

Given in 1917-1918

501. Italian Sculpture, from the fourth to the eleventh century. Ability to read Italian required. First term, 3 hours a week. Professor Marquand.

502. Italian Sculpture, from the eleventh to the fifteenth century. Ability to read Italian required. Second term, 3 hours a week. Professor Marquand.

505, 506. Romanesque Architecture. An intensive study of the origins and development of the Romanesque style in religious architecture, with exercises in drawing. Both terms, 3 hours a week. Professor Butler.

525. Masaccio and the Florentine Realists, including some study of the minor decorative painting of the Early Renaissance. Conferences and reports. First term, 3 hours a week. Professor Mather. [Not given, 1917-18.]

526. Giorgione, Palma Vecchio and Titian. The object of the course is to ascertain the work of Giorgione, and to study the artistic origins of Titian. His later work will be considered incidentally. The works of L. Justi and Lionello Venturi will be the point of departure. Second term, 3 hours a week. Professor Mather. [Not given, 1917-18.]

509. Early Christian Art. An examination of the sources of mediaeval art, with special reference to the Orient,

and of the formation of mediaeval iconography and symbolism. First term, 3 hours a week. Professor Morey.

528. Mediaeval Illumination. The evolution of manuscript illumination and miniatures from the fourth to the fifteenth century, with a classification of periods and schools, and special reference to the development of the Western styles from the Carolingian period to the Renaissance. Second term, 3 hours a week. Professor Morey.

507. Greek Archaeology. This course is intended to familiarize the student with the general subject of Greek Archaeology. To that end architecture, sculpture, painting, ceramics, gems, coins, terra cotta and metal work will be considered. Reports on assigned subjects will be read by members of the course. First term, 3 hours a week. Professor Elderkin.

510. Greek Sculpture. A systematic study of the history of Greek Sculpture. Reports, and reviews of recent studies will be read by members of the course. Second term, 3 hours a week. Professor Elderkin. [Not term, 1917-18.]

534. Art Commentary on Greek Literature. This course is designed to give students of Greek literature some archaeological background. The lectures will be chiefly concerned with the comparative study of literary and artistic versions of Greek legend. Second term, 3 hours a week. Professor Elderkin. [Not given 1917-18.]

For the years 1918-1919, and 1919-1920, other courses will be substituted as occasion requires according to the following provisional schedule.

Given in 1918-1919

515. Italian Sculpture of the fifteenth century. First term, 3 hours a week. Professor Marquand.

516. Italian Sculpture of the sixteenth century. Second term, 3 hours a week. Professor Marquand.

519, 520. Gothic Architecture. Both terms, 3 hours a week. Professor Butler.

511. Giotto and his Associates. First term, 3 hours a week. Professor Mather.

512. El Greco and Velasquez. Second term, 3 hours a week. Professor Mather.

509. Early Christian Art. First term, 3 hours a week. Professor Morey.

528. Mediaeval Illumination. Second term, 3 hours a week. Professor Morey.

507. Archaeology. First term, 3 hours a week. Professor Elderkin.

510. Greek Sculpture. Second term, 3 hours a week. Professor Elderkin.

532. Olympia, Delphi, and Epidaurus. Second term, 3 hours a week. Professor Elderkin.

Given in 1919-1920

513. Theories of Art. First term, 3 hours a week. Professor Marquand.

503, 504. Early Christian and Byzantine Architecture. Both terms, 3 hours a week. Professor Butler.

517. Sienese Painters of the thirteenth and fourteenth centuries. First term, 3 hours a week. Professor Mather.

518. Leonardo da Vinci. Second term, 3 hours a week. Professor Mather.

509. Early Christian Art. First term, 3 hours a week. Professor Morey.

528. Mediaeval Illumination. Second term, 3 hours a week. Professor Morey.

507. Greek Archaeology. First term, 3 hours a week. Professor Elderkin.

510. Greek Sculpture. Second term, 3 hours a week. Professor Elderkin.

514. Greek Painting. Second term, 3 hours a week. Professor Elderkin.

For undergraduate courses in Art and Archaeology also listed as graduate courses, see page 300.

SANSKRIT AND GENERAL LINGUISTICS

*401, 402. Elementary Sanskrit. Grammar, exercises and reading, with comparison of sounds and forms with the Latin, Greek, and Germanic. This course is intended especially for students of the Classical and Germanic languages. The Sanskrit is taught from the comparative standpoint, and its relationship in sounds, inflections, and syntax to the other Indo-European languages is emphasized. Geiger's *Elementarbuch der Sanskrit-Sprache* (Kaiser, Munich), Whitney's *Sanskrit Grammar,* Lanman's *Sanskrit* Reader, Thumb's *Handbuch des Sanskrits* (Winter, Heidelberg). Both terms, 3 hours a week. Professor Robbins. [1916-1917.]

501 Classical Sanskrit. Selections from the Hitopadeca, and the Mānava-Dharma-Cāstra. Introduction into the later Sanskrit literature. Comparative study of words and forms. First term, 3 hours a week. Professor Bender.

502. Vedic Philology and Literature. Reading and inter-

* Also listed as a graduate course.

pretation of selected hymns of the Rig-Veda or Atharva-Veda, with comparative study of their linguistic and mythological elements. Second term, 3 hours a week. Professor Bender.

503. The Elements of Linguistic Science. The history, methods, and results of Comparative Philology, with some account of the ethnology and religions of the Indo-European peoples. The origin, life, and growth of language. First term, 3 hours a week. Professor Bender.

504. Comparative Grammar of the Indo-European Languages. The fundamentals of the subject with special emphasis on Greek, Latin, German, Sanskrit. Detailed treatment of one of the following topics; vocalism, consonantism, noun-formation, inflection. Second term, 3 hours a week. Professor Bender.

CLASSICS

GREEK

Greek Composition. A certain degree of facility in writing Greek is expected of candidates for the Doctor's degree, and those who have not already attained it are advised to make the necessary arrangements for the purpose with Professor Hutson.

501. Comparative Greek and Latin Grammar. A brief introduction to the study of phonetics and comparative philology; comparison of the sounds and inflections of the two languages. An elementary knowledge of Sanskrit is desirable, but not necessary. First term, 3 hours a week. (An acquaintance with comparative grammar is expected of candidates for the Doctor's degree, and this course is recommended to those who have not already acquired a familiarity with the subject). Professor Robbins. [Not given, 1917-1918.]

505. Attic Orators. A study of the beginnings and development of Attic oratory, excluding Demosthenes. Assigned readings in Antiphon, Andocides, Lysias, Isaeus, Isocrates, Aeschines. Collateral reading and reports. First term, 3 hours a week. Professor Hutson. [1918-1919.]

510. Demosthenes. Private Orations. The private orations will be interpreted, with discussion of typical questions of Athenian private law. Second term, 3 hours a week. Professor Capps. [Not given, 1917-1918.]

512. Pindar and Bacchylides. The extant poems of both poets will be interpreted and certain of them critically studied. The course is designed to give a practical introduction to Greek metrics. Second term, 3 hours a week. Professor Capps. [Not given, 1917-1918.]

513. Aristotle. The Athenian Constitution. In addition to the interpretation of the text, collateral reading will be assigned in the historians, in Plutarch, and in the inscriptions. Topics in Athenian constitutional history and political institutions will be assigned for report, and members of the course will be encouraged to undertake original studies in these fields. First term, 3 hours a week. Professor Capps.

514. Aristotle. The Politics. An introduction to the political and economic writings of Aristotle and to the social and political thought of Greece. The whole of the work will be covered, with collateral reading in Plato's *Republic* and *Laws*. Second term, 3 hours a week. Professor Capps. [1919-1920.]

516. Greek Comedy. The course of development of comedy will be followed from the beginnings down to the perfected New Comedy. The plays of Aristo-

phanes will first be rapidly reviewed, with a detailed study of their structure and technique. Especial attention will be paid to the early period and to the two great periods of transition. Reports upon articles, monographs, and individual poets will be called for and topics in dramatic technique, literary history, and chronology will be assigned for investigation. Second term, 3 hours a week. Professor Capps. [Not given, 1917-1918.]

517. Thucydides. Selections from his account of the Peloponnesian War will be edited by the members of the class, with textual, grammatical, and exegetical commentaries. Lectures will be given by the instructor and reports will be presented by members of the class, dealing with Greek historical literature in general, and with the life of Thucydides, his sources and methods, the literary and historical value of his work, and his influence in ancient and modern times. First term, 3 hours a week. Professor Prentice. [1919-1920.]

518. History of Greece. Lectures on the History of Greek lands, from the earliest times to the Roman conquest. Special attention will be paid to the sources of historical knowledge, to the methods of historical study, and to the most recent development of historical research. The testimony of various ancient authors on the same subjects will be compared, and certain historical problems will be assigned to the members of the class to give practical experience in historical criticism. Second term, 3 hours a week. Professor Prentice. [1918-1919.]

521. Homeric Antiquities. Lectures will be given on the general subject. Special topics will be studied, such

as the Homeric state and institutions, houses and furniture, dress and private life, slavery, trade and crafts, war and weapons, religion and worship. Reports will be heard from the members of the class. First term, 3 hours a week. Professor Prentice.

522. Topography of Attica. This course will deal primarily with the topography of Athens and Attica. The first book of Pausanias will be read and studied critically, with special reference to the problems concerning the city wall before and after Peisistratus, the temples of the acropolis, the precincts of Dionysus, the Pynx and Agora. Reports on various topics will be read by members of the class. Lectures will be given on the life of Pausanias, his sources and the value of his book not only with reference to Archaeology in general but also to Mythology and History. Second term, 3 hours a week. Professor Johnson. [Not given, 1917, 1918.]

523. Greek Papyri. An introduction to the study of the Greek papyri, their decipherment and interpretation. After a brief review of the principal literary papyri found in recent years, attention will be focused upon representative non-literary documents of various types, especially those bearing upon legal and political institutions and upon private life and customs. First term, 3 hours a week. Professor Capps. [1918-1919.]

524. Documents from the Greek Inscriptions. Exercises in the interpretation of important typical documents preserved in inscriptions, especially the Attic inscriptions from the fourth century on. Especial attention will be given to political and religious institutions, to the Athenian calendar, and to private life. Matters of epigraphy will receive only incidental attention, the

object of the course being to familiarize the student with the documents as such. Second term, 3 hours a week. Professor Johnson. [1918-1919.]

525, 526. The Greek Theatre. The general field of Greek scenic antiquities will be covered by lectures and reports; but attention will be directed particularly to unsolved problems in connection with the history and structure of the theatre, technical terms, scenic appliances, the dramatic contests, and the like. The course will be given a practical bearing by the scenic analysis of a number of plays by each member of the class. Both terms, 3 hours a week. Professor Capps. [1919-1920.]

527. Introduction to the Principles and Methods of Text Criticism. Portions of a single play of Euripides will be critically interpreted by the instructor and by members of the class in turn. Occasional lectures by the instructor on the aims and methods of textual criticism and interpretation; practical exercises in the construction of an apparatus criticus. First term, 3 hours a week. Professor Capps. [Not given, 1917-1918.]

530. Greek Dialects. A study of the sounds and forms of the various dialects, on the basis of the dialect inscriptions. Buck's *Greek Dialects* will be used as an introduction to the work. Second term, 3 hours a week. This course alternates with that on the Italic Dialects. Professor Robbins. [Not given, 1917-1918.]

533. Arrian and the Sources of the History of Alexander. A critical study of Alexander's conquests. The ancient authors dealing with the subject will be read with a view to comparing their accounts with one an-

other, and to discovering the different lines of tradition. The origin and development of the *vulgata* will be traced. First term, 3 hours a week. Professor Prentice. [Not given, 1917-1918.]

534. Greek Inscriptions. Lectures will be given on the history of classical epigraphy, the alphabet, and the methods of interpretation. Practical exercises will be held in reading from casts and squeezes. Inscriptions of especial historical value, chiefly those of the fifth century, will be interpreted and discussed. Second term, 3 hours a week. Professor Prentice. [Not given, 1917-1918.]

535, 536. Greek Tragedy. The beginnings of tragedy and the course of its development will be treated in lectures, with consideration of the legendary material, the external conditions in which tragedy arose, the dramatic and scenic adjustment of its parts, the language and meters, and the history of our texts. The course will involve the reading and analysis of a number of tragedies by each member of the class and a general survey of all the extant plays by the instructor. Both terms, 3 hours a week. Professor Capps. [1918-1919.]

537. Greek Palaeography. A brief survey of the development of writing in the Papyri, and a thorough study of the uncial and minuscule Bookhand, with practical exercises in deciphering, dating, and investigating them. Introduction to the principles and methods of textual criticism, applied to the postclassical and Byzantine texts. The collation and classification of manuscripts, the construction of an apparatus criticus, discussion of readings and editions, formation of indices. First term, 3 hours a week. Dr. van den Ven. [Not given, 1917-1918.]

538. Later Greek Sophistry. After an introduction treating of the origin and the development of Sophistry in the Empire the course will deal especially with the writers of the fourth century. The works of Libanius and Julian will be interpreted and analyzed by the members of the class. Besides the literary problems, various topics will be studied, such as the schools in the Greek Orient, life in the Hellenistic cities, the imperial administration, the relation between Hellenism and Christianity, and the pagan religions. Second term, 3 hours a week. Dr. van den Ven. [Not given, 1917-1918.]

539. Greek Christian Oratory of the Fourth Century. Athanasius, Basil, Gregory of Nazianzus, John Chrysostom. Critical reading of some of their writings, with especial reference to various philological, literary, and historical questions. First term, 3 hours a week. Dr. van den Ven. [Not given, 1917-1918.]

540. The Age of Justinian. A general course fundamental to the study of Byzantine history, literature, and art, for students of history, classics, and archaeology. Lectures will be given on the general subject. The sources will be critically analyzed and discussed, and reports on special topics will be read by members of the class. Second term, 3 hours a week. Dr. van den Ven. [Not given, 1917-1918.]

541. Greek Epistolography. The letters of Libanios, Julian, Synesias and the great Christian orators of the fourth century A.D. will be specially studied. The origins and the development of the theory and practice of Epistolography and its connection with the sophistry will be traced. Readings and reports. First term, 3 hours a week. Dr. van den Ven.

553, 554. Byzantine History. The Byzantine Empire and civilization from the beginnings under Constantine the Great to the close of the reign of Heraclius (324-641). A study of the transition period between the end of the old Roman Empire and the complete formation of Byzantinism in the seventh century. Special attention will be given to the reign of Justinian, and to the literature and art of the times. Three hours a week throughout the year. Dr. van den Ven.

LATIN

Latin Composition. A certain degree of facility in writing Latin is expected of candidates for the Doctor's degree, and those who have not already attained it are advised to make the necessary arrangements for the purpose with Professor Basore. [1918-1919.]

501. Comparative Greek and Latin Grammar. See page 267.

544. The Works of Caesar and his continuators. A course planned primarily for those who intend to teach in secondary schools. Second term, 3 hours a week. Professor Westcott. [Not given, 1917-1918.]

549, 550. Virgil. The works of Virgil and the *Appendix Vergiliana* will be studied chiefly in their literary aspects. Attention will be paid to the poet's motives, sources, technique, and his influence on subsequent literature. Lectures and interpretations; reports on topics of Virgilian criticism. Both terms, 3 hours a week. Professor Stuart. [1919-1920.]

552. Livy. Study of the credibility, sources, methods, and purpose of the History, and the development of the author's style. The results of study will be embodied in weekly reports. Second term, 3 hours a week. Professor Westcott. [1919-1920.]

548. Plautus. The course will deal, on the literary side, with dramatic form, character-drawing, diction, and style; on the linguistic side with vocabulary, metrical treatment, and ante-classical forms and constructions. Second term, 3 hours a week. Professor Abbott. [Not given, 1917-1918.]

556. Alexandrian Influence in Roman Poetry. This course will include a general survey of Alexandrian forms and tendencies in poetry and of their adaptation by the Roman poets of the Late Republic and the Early Empire. The works of Catullus and of the Elegiac Poets will be the objects of special study. Second term, 3 hours a week. Professor Stuart. [Not given, 1917-1918.]

557. Early Latin. Allen's *Remnants,* Merry's *Fragments of Roman Poetry,* and Bücheler's *Carmina Epigraphica.* The object of the course is especially to give some clear and ordered knowledge of the beginnings of Roman literature. The treatment will be mainly philological and literary. First term, 3 hours a week. Professor Abbott. [1918-1919.]

558. Italic Dialects. Buck's *Grammar of Oscan and Umbrian* will be used. The aim of the course will be the historical and comparative study of these dialects in their relation to Latin. Second term, 3 hours a week. Professor Robbins. [1918-1919.]

554. Roman Biography. The origin and the development of ancient biographical writing will be studied with especial reference to the literary and rhetorical aspects. The literary and the imperial biographies of Suetonius, the *Agricola* of Tacitus, and certain *Vitae* found in the Scriptores Historiae Augustae will be subjected to analysis and criticism. Second term, 3 hours a week. Professor Stuart. [1918-1919.]

560. Ancient Literary Criticism. Lectures on the history of critical thought in antiquity. Reading and discussion of Aristotle's *Poetics,* Horace's *Art of Poetry,* Aristotle's *Rhetoric,* Book III, Demetrius *On Style,* Dionysius *On Literary Composition,* Longinus *On the Sublime,* Quintilian, Book X. Second term, 3 hours a week. Professor Basore. [Not given, 1917-1918.]

562. Ancient Rhetoric. Lectures on the development of rhetorical theory. Interpretation and illustration of Quintilian's *Institutio Oratoria.* Study of rhetorical practice, as exemplified in the Attic orators and in Cicero, and of the influence of rhetoric on literature. Second term, 3 hours a week. [1918-1919.]

563, 564. The Latin Romance. Attention will be directed in the main upon Petronius and Apuleius. The purpose of the course will be to study the origin, the history, and the characteristics of the Latin Romance. Papers will be presented from time to time by the members of the class. Both terms, 3 hours a week. Professor Abbott. [Not given, 1917-1918.]

567. Latin Inscriptions. A large number of inscriptions will be read and interpreted from the printed text and from squeezes; special historical topics will be taken up for investigation, and a thorough working knowledge of the contents of the *Corpus Inscriptionum Latinarum* will be acquired. First term, 3 hours a week. Professor Abbott. [Not given, 1917-1918.]

565. Palaeography. General and applied. Introduction to the psychology, methodology, and history of ancient writings; the material and form of books, the evolution of alphabetical writing, the science and method of textual and higher criticism. Application in the field of Latin codices, with practice in decipherment, dat-

ing, and the method of research; including search for the manuscripts, exercise in the description and collation of manuscripts and the formation of genealogical tables, the discrimination of documents and voluntary variations. First term, 3 hours a week. Dr. Richardson and Dr. Van Hoesen. [Not given, 1917-1918.]

569. Historians of the Roman Empire. A study will be made of the sources used by the various historians in compiling their works, of their methods in dealing with these sources, of the literary and political influences under which they wrote, and of the tendencies exhibited in their works. Papers on these subjects will be prepared by members of the class and submitted for discussion. First term, 3 hours a week. Professor David Magie. [1919-1920.]

573. History of the Early Roman Empire. The sources for the history of the Early Roman Empire will be critically examined and discussed, and the historical material thus obtained will be combined into a history of the period presented in reports by members of the class. First term, 3 hours a week. Professor David Magie. [1918-1919.]

572. The Roman Provinces. An analysis of the Roman imperial policy and of the methods by which the provinces were acquired and held, followed by a study of the Roman system of government and taxation in the provinces, of social and political conditions in the cities, and of municipal government under the empire. The course will be based mainly on the inscriptions, on Cicero's orations against Verres and his letters from Cilicia, and on Pliny's correspondence with Trajan. Second term, 3 hours a week. Professor Abbott. [Not given, 1917-1918.]

574. Research Course in Roman Politics. The political history of the years 62-57, 49-48, and 44-43 B.C. will be studied from the sources; the careers of the leading politicians of those years will be followed, and the character and purpose of the several political parties will be examined. Second term, 3 hours a week. Professor Abbott. [1918-1919.]

576. The Private Law Orations of Cicero. A study of the legal procedure of the time of Cicero. This course alternates yearly with course 578. Second term, 3 hours a week. Professor Westcott. [Not given, 1917-1918.]

578. Sources of Early Roman Law. Bruns: *Fontes Iuris Romani Antiqui,* and Lindsay: *Latin Inscriptions* will be used. This course alternates yearly with course 576. Second term, 3 hours a week. Professor Westcott. [1918-1919.]

579, 580. Colloquial Latin. The object of the course will be to investigate some of the characteristics of colloquial Latin in the matter of lexicography, pronunciation, syntax and style, and to determine to some extent the relation of colloquial to literary Latin, as well as its connection with archaic Latin on the one hand and with the Romance languages on the other. Both terms, 3 hours a week. Professor Abbott. [1918-1919.]

581. General Course in Classical Philology. Such topics will be briefly treated in lectures and in reports by students as the history of classical philology, the relation of the several fields to one another, the transmission and reconstruction of classical texts, the formation and use of a critical apparatus, the making of a lexicon, and the method to be used in testing

the historical sources for a given period. Typical lists of books for classical students will also be prepared by the instructor and by members of the course. First term, 3 hours a week. Professor Abbott.

587, 588. Augustine and Patristic Latin. The *De Civitate Dei* will be read. Special attention will be given to its literary sources, argument, historical and philosophical bearings, and its relation to the other writings of Augustine. If time permits, other writings of Augustine, the *Apologeticus* of Tertullian and the *Octavius* of Minucius Felix will be read. Both terms, 3 hours a week. Dean West.

589, 590. Early Mediaeval Histories. The following writings will be studied: Iordanes: *Getica;* Eugippius: *Vita Sancti Severini;* Beda: *Historia Ecclesiastica;* Einhard: *Vita Caroli Magni;* Alcuin: *Epistles.* Both terms, 3 hours a week. Dean West. [1918-1919.]

591, 592. Later Mediaeval Literature. Reading and interpretation of writers selected to illustrate various aspects of the later mediaeval Latin and the history and literature of the times. The books proposed for reading are John of Salisbury: *Policraticus;* Roger Bacon: *Opus Majus;* Adam of Hamburg: *Descriptio Insularum Aquilonis;* Arnoldus: *Chronica Slavorum;* Richard de Bury: *Philobiblon.* Both terms, 3 hours a week. Dean West. [1919-1920.]

ENGLISH

501. Germanic Origins of English Speech. This course is designed to give practice in deriving the Germanic elements of English. Attention is paid to the laws of semantic as well as those of phonetic change. A knowledge of Old English and German is required,

while some acquaintance with Gothic must be acquired, if it be not offered. First term, 3 hours a week. Professor Spaeth.

502. Historical English Grammar. An historical study will be made of the sounds, forms, syntax, and vocabulary of the English language. This study will be inductive and will be based upon a comparison of various versions of the English Bible of various date and dialect. Special attention will be devoted to the evolution of standard speech. The course in Germanic Origins of English Speech is a prerequisite to this course. Second term, 3 hours a week. Professor Griffin.

503. Old English Poetry. An introductory course in the study of Old English poetry; a grammatical and phonological study of Old English, and a general survey of Old English literature, particularly of the various forms of poetry, with illustrative reading. When necessary, this course will be so modified as to provide for the needs of students who have not previously taken Old English. First term, 3 hours a week. Professor Hunt.

504. The Old English Epic: Pagan. This course will consist in either: (a) a critical reading of *Beowulf* with study of its historical backgrounds and of Germanic culture; or (b) an investigation of the heroic epic in Germanic literature, with special reference to the bearing of the main cycles on Old English literature. The Scandinavian and Old and Middle High German epics may be read in translation, but the Old English material is studied in the original. Epic stories, like that of the *Nibelungen Lied*, may be traced through various forms down to their treatment in modern times. Second term, 3 hours a week. Professor Spaeth.

506. The Old English Epic: Christian. A critical reading of the poems of the Junian MS., or of the Cynewulfian school, a study of their relationship to their sources and to the heroic epic, and an investigation of the influence of European culture, particularly that of the church, on the development of Old English literature. Second term, 3 hours a week. Professor Gerould.

507, 508. Ælfred and his Times. The object of this course is to give a general survey of West-Saxon literature, Latin and native, from its inception to the Conquest, and to devote especial attention to the writings attributed to Ælfred or inspired by him. The figure of Ælfred, and its influences on his time, will receive particular consideration. Both terms, 3 hours a week. Professor Miles. [Not given, 1917-1918.]

509, 510. Old French. An introductory course, especially adapted to students of English. The development of the French language from the Latin will be studied, and especial attention will be paid to the Anglo-Norman and to the influence of French on the English language. The reading will include: the National Epic, the Arthurian Romances, the Historians, the Drama, the Allegory (*Roman de la Rose*), and Lyric Poetry. Both terms, 3 hours a week. Professor Buffum.

511, 512. Chaucer. The aim of the course is to give the student a thorough acquaintance with Chaucer's writings and with the literature of Chaucerian scholarship. Among the topics considered are: the collation and affiliation of manuscripts and the construction of a critical text; tests for determining the genuineness of works attributed to the poet; the chronology of

his writings and the methods of determining it; contemporary literature in France, Italy, and in England; Chaucer as typical of the later Middle Ages. Both terms, 3 hours a week. Professor Root. [Not given, 1917-1918.]

513, 514. Types of Mediaeval Narrative. Romances, legends, fabliaux, exempla, or ballads will furnish the material for investigation in this course. The type chosen for the particular year will be studied with reference to its origins, native and Continental; its relationship to other forms; its development; and its influence on later literature. Practice will thus be afforded in the critical handling of mediaeval documents as well as in the shaping of literary history. Both terms, 3 hours a week. Professor Gerould.

515, 516. Romances of the Troy Cycle. Representative versions of the story of Troy will be compared with their classical prototypes, with a view to illustrating the transformation of the ancient epos into the mediaeval romance. The romance of Troy will then be compared with the romances dealing with Thebes, Alexander, and other classical themes in order to make clear the influence of one cycle upon another. Special attention will be devoted to the evolution of the Troilus and Cressida story. Both terms, 3 hours a week. Professor Griffin.

517, 518. The Renaissance in England with especial reference to Spenser and Bacon. A study of the poetry and genius of Spenser, especially as modified and determined by humanism and the Italian Renaissance, and by the combination of these influences with the surviving culture of the Middle Ages. The nature of Spenser's enthusiasm for Italian and classical liter-

ature, philosophy, and art, and his knowledge and use of them. Spenser as typical of the Renaissance in his times. Some attention to Bacon as manifesting certain more literal and prosaic phases of Renaissance culture than does Spenser. Both terms, 3 hours a week. [1918-1919 and alternate years following.] Professor Osgood.

519, 520. Elizabethan Drama. The exact nature of this course varies from year to year, according to the needs of the students taking it. The object is to obtain a first-hand knowledge of the chief figures and main types in the drama from 1500 to 1642. Sometimes one dramatist is taken as a centre around which the work is grouped; sometimes several dramatists are taken up in turn, one being assigned to each member of the class for special study; sometimes the development of one form of drama, as romantic tragedy or realistic comedy, is studied in the works of various dramatists. Both terms, 3 hours a week. Professor Parrott.

521. Shakespeare. The purpose of this course is to introduce the student to the criticism and interpretation of the text of Shakespeare. A single play, such as *Hamlet, Macbeth,* or *Romeo and Juliet,* varying from year to year, is made the basis of study. First term, 3 hours a week. [1918-1919 and alternate years following.] Professor Parrott.

523, 524. The forms of English Prose-Style from 1500 to 1680. The course involves an exact study of rhetorical phenomena, especially as they show the relations of the prose of the period with (1) Mediaeval Latin prose, (2) Ciceronian prose, and (3) Anti-Ciceronian prose. But the forms are also studied

in their relations with general movements of ideas in the sixteenth and seventeenth centuries. Both terms, 3 hours a week. [1917-1918 and alternate years following.] Professor Croll.

525, 526. Milton. The chief cultural forces of Milton's time, especially those which were combined in his own character and training; his achievements in prose and poetry, with reference to their origins, forms, artistic and ethical values, etc.; his significance in English political and literary history. Both terms, 3 hours a week. [1917-1918 and alternate years following.] Professor Osgood.

527, 528. The Drama in England from 1660 to 1900. This course begins with the opening of the theatres after the Puritan Revolution and ends with the work of our contemporary dramatists. It aims to show the successive development of various dramatic types and to introduce the student to the theory, technique, and historical background of modern drama. Both terms, 3 hours a week. Professor Heermance. [Not given, 1917-1918.]

529, 530. Wordsworth and Coleridge. Their early contemporaries, their relations to the political and philosophical currents of their time, and their influence upon the theory and practice of poetry in Britain and America. Both terms, 3 hours a week. [1918-1919 and alternate years following.] Professor Harper.

531, 532. History of Literary Criticism. A study of the chief theories of criticism, ancient and modern, particular attention being paid to the modern developments in French, German, and English. Both terms, 3 hours a week. [1917-1918 and alternate years following.] Professor Harper.

533, 534. The English Lyric. The object of the course is to trace the chief influences, native and foreign, which have provided the English lyric with its most important forms. The work may in any year be limited to the study of a particular period, or a particular kind of lyric, or a particular stream of influence. Both terms, 3 hours a week. [1918-1919 and alternate years following.] Professor Croll.

See also Modern Languages, Romanic, 539, 540. The Technique of the Drama. Professor Stuart.

Aside from the courses described above, graduate students are permitted to follow the senior courses in Old English literature and in the literature of the eighteenth and nineteenth centuries, conducted by Professors Hunt, Spaeth, Noyes, and Root, provided that they fulfil certain stipulated requirements.

MODERN LANGUAGES

GERMANIC

501. Old High German. Grammar, reading and lectures on the historical development of the German language. Knowledge of modern German and Middle High German required, and some knowledge of Gothic useful. First term, 3 hours a week. Professor Hoskins.

503. Gothic. Grammar, reading, and lectures. Papers based on investigations of special subjects. This course will be comparative in its methods and will aim to furnish additional equipment for the study of Germanic and Indo-European grammar, phonetics, syntax, and etymology. Knowledge of modern German required. First term, 3 hours a week. Professor Bender.

507, 508. Advanced German Composition. A practical course in the writing of German prose, accompanied by a review of German syntax. Both terms, 1 hour a week. Professor Blau.

510. Middle High German. Grammar, lectures, and reading. A foundation for the historical study of modern German and an introduction to the study of Germanic Philology. Proficiency in modern German is required. Second term, 3 hours a week. Professor Hoskins.

511, 512. Old Icelandic. Grammar, lectures, and reading. For advanced students. Both terms, 3 hours a week. Professor Priest.

514. Lithuanian. Introduction to the language and literature. Grammar studied comparatively. Selections read from Donalitius' *Seasons,* and from the folk-songs (Dainos). Lectures on general subjects, including the influence of German on Lithuanian. Knowledge of German required. Second term, 3 hours a week. Professor Bender.

515, 516. History of the Novel in Germany. The early prose romances, the Volksbücher, the pastoral, heroic and picaresque novel, the humorous, philosophical, sentimental, and romantic novel of the eighteenth and early nineteenth centuries, the origin and growth of the realistic novel, studies in recent German fiction. Both terms, 3 hours a week. Professor Thayer. [Not given, 1917-1918.]

517, 518. History of Lyric and Ballad Poetry in Germany. German lyric and ballad poetry from its earliest beginnings through Minnesang, Meistersang, and early Volkslied, Protestant religious poetry, and the Renaissance to the poetry of the great century of German

literature. Here the great masters, the several schools and groups, especially the early and late Romanticists, the Swabians, Young Germany, and the Munich group, will be studied. In conclusion the poetry of the second half of the nineteenth century will be treated. Both terms, 3 hours a week. Professor Blau.

In addition to the work offered in Germanics, courses in General Linguistics and Sanskrit are also given. See page —.

The following courses, though not regularly scheduled for 1917-1918, have been offered in previous years, and may, on application, be given:

504. German Literature since 1885. An investigation of the chief elements in the poetry, novel and drama of the last generation. Lectures, reading, and the preparation and discussion of papers, on individual authors and their works. Second term, 3 hours a week. Professor Priest.

505, 506. History of the Drama in Germany. The theory and technique of the drama from the earliest times to the present. Both terms, 3 hours a week. Dr. Wallace. [Not given, 1917-1918.]

509, Historical German Grammar. Introduction, phonology, morphology. Requires a knowledge of Gothic, Old High and Middle High German. Lectures. First term, 3 hours a week. Professor Hoskins.

522. Introduction to the study of Old German Literature, and the ethnography of the Teutonic tribes. Second term, 3 hours a week. Professor Hoskins.

The following courses, though designated for undergradu-

ates in their senior year, are open to first year graduate students who, in addition to the regular work, fulfill certain specified requirements. They are described in detail on page 176.

401, 402. The Romantic School in Germany. Professor Hoskins.

403, 404. Middle High German. Professors Hoskins and Priest.

ROMANIC

507, 508. Advanced French Composition. A course in the writing of French prose, with a review of French syntax. Both terms, one hour a week. [Not given, 1917-1918.]

517, 518. History of French Sounds and Inflections. Lectures, discussion, and applications to text selections. Both terms, 3 hours a week. Professor Armstrong.

523. History of the Novel in France. Reading, lectures, and the preparation and discussion of papers, treating of the rise and development of the novel in France up to the end of the seventeenth century. First term, 3 hours a week. Professor Vreeland.

525. Provençal. A course in the study of conditions under which Provençal literature flourished, of the phonology, morphology and syntax of idiom, and in the reading of selected texts. First term, 3 hours a week. [Not given, 1917-1918.]

526. The French National Epic. A critical survey of the *Chansons de Geste* and analysis of a few representative texts of the royal, feudal and provincial groups. Second term, 3 hours a week. Professor Critchlow.

535. The Breton Epic. The works of Chrétien de Troyes and their relation to the origins of the Arthurian

material. First term, 3 hours a week. Professor Buffum.

537. The Old French *Romans d'Aventure*. An investigation of the sources of French mediaeval fiction based upon a study of several poems of this group. First term, 3 hours a week. Professor Critchlow.

539, 540. Technique of the Drama. In this course the development of dramatic technique is traced from the beginning to the present day. During the first term attention is centered on the Greek and Latin dramatists and theorists, and during the second term, on the plays and theories of dramatic technique produced in Italy, France, England, and Norway. The aim of the course is to investigate the principles of play construction from both an historical and practical viewpoint. Both terms, 3 hours a week. Professor Stuart.

545, 546. The French Language: Studies in Analysis and Method. The aim of this course, open only to students who have some knowledge of the origins and development of the French language, is to contribute to a grasp both of facts and of method in the study of French. A certain number of texts will be interpreted, selected from the Old French lyric literature; the successive stages in the syntactical history of the French verb will be treated in their relation to modern French usage; and practical exercises in philological method will be based on the constitution from manuscript material of the Tours-Carpentras version of the *Barlaam et Josaphat*. Both terms, 3 hours a week. Professor Armstrong.

547. Old Spanish Readings. Reading and linguistic study of the *Poema de Mio Cid* and other literary monuments of the early Spanish period. First term, 3 hours a week. Professor Marden.

551. Spanish Historical Grammar. Lectures on Spanish phonology and morphology; study of specific texts, for the purpose of applying the laws deduced in the lectures. First term, 3 hours a week. Professor Marden.

552. Spanish Epic Poetry. Lectures. Study of the epic with special reference to its national traits and import. Second term, 3 hours a week. Professor Marden.

553, 554. Spanish Seminary: The *Refranero.* A study of the Spanish proverbs and proverb-collections from the standpoint of their literary and lexicographical significance in the literature of the seventeenth century. The basis of the work will be Gonzalo Correas: *Vocabulario de Refranes.* Both terms, 3 hours a week. Professor Marden.

See also English 531, 532, History of Literary Criticism, Professor Harper.

The following courses, though not regularly scheduled for 1917-1918, have been offered in previous years, and may, on application, be given:

528. Molière. A brief introductory study of the earlier comedy, with detailed critical study of some work of Molière with reference to language, sources, and bearing on contemporary life. Second term, 3 hours a week. Professor Koren.

531, 532. The Development of Literary Criticism in France. A consideration of the status of criticism in the Italian Renaissance; its real and supposed sources, its principles, method, and authority; French critical writing in detail from Du Bellay to the present. Both terms, 3 hours a week. Professor Gauss.

542. The Epic of Antiquity. A survey of the poetry known as the matter of Rome, together with a study of the transition period between the national and court epic groups. Second term, 3 hours a week. Professor Critchlow.

543, 544. Romanticism. The origins and development of the romantic tendencies in French literature and the relationship of the romantic movement in France to the movements in Europe generally. Both terms, 3 hours a week. Professor Gauss.

555, 556. English Influence in the Eighteenth Century on French literature. Both terms, 3 hours a week. Professor Stuart.

The following courses, though designed for undergraduates in their senior year, are open to first year graduate students who, in addition to the regular work, fulfill certain specified requirements. They are described in detail on pages 178-179.

401, 402. The Romantic Movement. Professor Gauss.

403, 404. Old French. Professor Buffum.

405. French Literature of the XVIII Century. Professor Stuart.

406. French Literature of the XVI Century. Professor Vreeland.

407, 408. Italian Literature. Professor Gauss.

409, 410. Spanish literature. Professor Marden.

MATHEMATICS

The Honors courses of senior year are designed to furnish instruction of such a grade as is usually required by students in the first year of their graduate work. These courses are:

403, 404. Differential Geometry. Both terms.

405, 406. Algebra. Both terms.

407, 408. Prospective Geometry. Both terms. Professor Eisenhart.

409, 410. Analysis. Both terms. Professor Fine.

Each graduate course occupies three hours a week. A student who desires to engage in research will be particularly advised and assisted by that one of the professors under whose guidance he wishes to place himself.

The following graduate courses are offered:

509, 510. Theory of Functions of Real Variables. A critical study of differential and integral calculus, with applications to the elementary functions and current problems of analysis. Both terms, 3 hours a week. Dr. Pfeiffer.

518. Calculus of Variations. Historical examples. General theory. Isoperimetric problems and problems in space. Double integrals. Second term, three hours a week. Professor Eisenhart. [Not given 1917-1918.]

537, 538. Differential Equations. Both terms, 3 hours a week. Professor Boutroux. [Not given 1917-1918.]

543. 544. Algebraic Functions. Both terms, 3 hours a week. Dr. Alexander. [Not given, 1917-1918.]

531, 532. Analytical Mechanics, or Hydrodynamics and Elasticity. (Physics 505, 506.) Professor Adams. [Not given 1917-1918.]

SEMINARY. Both terms. Lectures on outstanding problems in some particular field of mathematics, together with reports by students on special topics belonging to this field. Professor Eisenhart.

The following courses have been given recently. It is the intention of the Department to repeat them periodically.

501. Theory of Substitutions. Elementary theory of substitutions. Groups of substitutions and rotations. Ap-

plication of the theory of groups to the solution of algebraic equations. First term. Professor Gillespie.

502. Theory of Invariants. The theory of invariants and covariants of binary quantics, developed in the symbolic notation of Clebsch. Second term. Professor Gillespie.

504. Linear Groups and Invariants. Second term. Professor Veblen.

505. Theory of Elimination. First term. Professor Fine.

506. Galois Theory of Algebraic Equations. Second term.

507. Linear Differential Equations. Existence theorems. Real variables: oscillation properties of second order equations, boundary value and expansion problems, related integral equations. Complex variables: the hypergeometric equation. First term.

508. Theory of Matrices. Second term. Professor Wedderburn.

511. Theory of Algebraic Numbers. First term. Professor Fine.

513, 514. The Theory of the Potential Function. Both terms, 3 hours a week. Dr. Alexander.

515. Differential Equations of Mathematical Physics. First term.

519. Partial Differential Equations. Existence theorems, and soluble forms with numerous exercises. First term. Professor Eisenhart.

521, 522. Projective Geometry. Advanced course. Both terms. Professor Veblen.

524. Analytic Projective Geometry. Invariants and covariants of binary forms. Clebsch's symbolic notation. Theory of higher plane curves. Second term.

525, 526. Differential Geometry. An introductory course. Both terms. Professor Eisenhart.

527, 528. Differential Geometry. An advanced course in special topics. Prerequisite: courses 525, 526. Lectures and conferences. Both terms. Professor Eisenhart.

529, 530. Infinitesimal Geometry. Historical readings from some of the memoirs of Monge, Dupin, Gauss, Weingarten, Darboux and Bianchi. Both terms. Professor Thompson.

533, 534. Theory of Functions of a Complex Variable. Both terms. Professor Fine.

536. Vector Analysis. An introductory course. Second term. Professor Eisenhart.

539. Application of Analysis to the Theory of Numbers, with special reference to the Riemann Zeta function, and the distribution of prime numbers. First term.

541, 542. Integral Equations. Both terms.

545, 546. Theory of Sets of Points. Both terms. Professor Veblen.

547, 548. Conformal Representation and the Uniformization of Analytic Functions. Both terms.

549. Birational Transformations. First term. Dr. Alexander.

550. Elliptic Functions. Second term.

552. History of Analysis. Second term, 3 hours a week. Professor Fine.

ASTRONOMY

501, 502. Theoretical Astronomy. Reading course. Calculations of Orbits. Watson; Oppolzer; Bauschinger. Both terms, 3 hours a week. Professor Russell.

503, 504. Practical Astronomy. Theory of instruments. Study of the determination of time, latitude, and azimuth; work with the equatorial on double stars,

variable stars, and the sun. Both terms, 3 hours a week. Professor Dugan.

505. Theory and Method of Reduction of Photographic Star Plates. Determination of star-places from photographic plates; stellar parallax, and proper motion. First term, 3 hours a week. Professor Russell.

506. Spectroscopy. The theory and use of the spectroscope as an implement of astronomical investigation, with practical work in the observatory. Second term, 3 hours a week. Professor Russell.

507, 508. Celestial Mechanics. An introduction to the general problems of the motions of the heavenly bodies. Lectures and collateral readings in the treatise of Tisserand. Both terms, 3 hours a week. Professor Russell.

509, 510. Photometry. Laws of radiation and illumination. Atmospheric extinction. The various kinds of photometers. Results of photometric investigation of the solar system. Work on variable stars with polarizing photometer attached to a 23-inch equatorial. Discussion of observations and interpretation of light-curves. Orbits of eclipsing variables. Photographic photometry. Müller: *Die Photometrie der Gestirne;* André: *Traité d'astronomie stellaire.* Both terms, 3 hours a week. Professor Dugan.

PHYSICS

501, 502. Mathematical Theory of Electricity and Magnetism. Theory of the potential; lines and tubes of force; electrostatics; dielectrics; electric images; magnetism and magnetic induction; electromagnetism; electromagnetic induction; equations of the electromagnetic field; electromagnetic theory of light; theory

of alternating currents; general equations; effects of resistance; inductance and capacity; distributed capacity; the rotating field; single and polyphase currents; high frequency currents and electrical oscillations; alternating current calculations; the symbolic method. Both terms, 2 exercises, about 5 hours a week. Professor McClenahan.

505, 506 *a*. (Mathematics 531, 532.) Analytical Mechanics, including the theory of small oscillations and the theory of the potential. Both terms, 3 hours a week. Professor Adams. [Not given, 1917-1918.]

505, 506 b. (Mathematics 531, 532.) Hydrodynamics and Elasticity. Both terms, 3 hours a week. Professor Adams. [Not given, 1917-1918.]

508. The Kinetic Theory of Gases. Introductory sketch of the theory of probabilities. Elementary study of pressure in gases. Maxwell's law of distribution and its developments. Equiparitition of energy. Molecular magnitudes. The Brownian movements. Boltzmann's H-theorem. Second term, 3 hours a week. Professor W. F. Magie. [Not given, 1917-1918.]

511. Theory of Elastic Solids. The physical properties of actual solids. The ellipsoids of strain and stress and their respective properties. Potential energy of strained solids. Problem of Saint Vénant. Special problems of flexure and tension. Distentional and compressional waves in solids of two dimensions. Double refraction and the Fresnel wave front. First term, 3 hours a week. Professor Loomis. [Not given, 1917-1918.]

512. Theory and Practice of Exact Measurements. This course is intended for students who have already had training in general laboratory practice. It is designed

to instruct them in more refined methods of observation, and especially to train them in the use of those instruments which are frequently employed in research. Second term, 3 hours a week. Professor Loomis.

509, 510. Light. Physical Optics: interference, Huygen's principle, diffraction, polarization. Electromagnetic theory: isotropic and crystalline bodies, absorption, dispersion, natural and magnetic activity, media in motion. Radiation; thermo-luminescence, fluorescence. Both terms, 3 hours a week. Professor Trowbridge. [Not given, 1917-1918.]

514. Spectroscopy. A discussion of the experimental investigation of emission, absorption, fluorescence, and phosphorence. Second term, 3 hours a week. Professor Robinson.

516. Atmospheric Electricity. Introduction to theory of ionized gases. Methods of observation. Atmospheric ionization, its cause, and distribution. Atmospheric potential gradient. General electrical phenomena. Detailed discussion of work of various observers. Second term, 3 hours a week. Professor Cooke. [Not given, 1917-1918.]

518 *a*. The Mathematical Theory of Electric Waves and Oscillations. Second term, 3 hours a week. Professor Adams. [Not given, 1917-1918.]

518 *b*. Statistical Mechanics and Kinetic Theory of Gases. A discussion of the methods of statistical mechanics, with applications to the kinetic theory of gases and the theory of radiation. Second term, 3 hours a week. Professor Adams. [Not given, 1917-1918.]

519, 520. Heat and Temperature. Principles of heat flow. Practical methods of measuring heat quantities and

temperature through extended ranges, chiefly by electrical methods. Calorimetry and pyrometry. This is a lecture and experimental course and is intended to give students a working knowledge of modern methods employed for measuring thermal conductivities, specific heats, latent heats, and low and high temperatures. the methods and electrical and optical pyrometry are considered. Both terms, one lecture and 4 hours supervised laboratory work a week. Professor Northrup.

The physical laboratory is open throughout the week to graduate students.

For undergraduate courses in Physics also listed as graduate courses, see page 310.

CHEMISTRY

501, 502. Advanced Quantitative Analysis and Research in Inorganic Chemistry. Both terms, at least 9 hours of laboratory work a week. Professor McCay.

503, 504. Metallography. Relations between the properties and the constitution of metallic alloys. Lectures, reading, and laboratory work. Both terms, 3 hours a week. Professor D. P. Smith. [Not given, 1917-1918.]

505, 506. Research in Metallography. Constitution and electrical properties of alloys; gas alloys. Both terms, hours to be arranged. Professor D. P. Smith.

507. Selected Topics in Advanced Inorganic Chemistry. A detailed and thorough study of certain topics in the field of Inorganic Chemistry. This course will consist of lectures, accompanied by the reading and discussion

of the literature. First term, 3 hours a week. Professor Foster. [Not given, 1917-1918.]

510. Chemical Crystallography. Polymorphism, isomorphism, mixed crystals, determination of transition temperatures, the comparison of crystalline forms in compounds of analogous composition, and other topics. Two lectures and at least three hours of laboratory work a week. Prerequisite course: Quantitative Analysis. Second term, 3 hours a week. Professor Van Nest. [Not given, 1917-1918.]

511, 512. Research in General Inorganic Chemistry. Both terms, hours to be arranged. Professor Menzies. [Not given, 1917-1918.]

513. Organic Chemistry. Lectures on stereochemistry and tautomerism, supplemented by conferences and reports. First term, 3 hours a week. Prerequisite courses: Organic Chemistry, Parts I, II, and III, or equivalent. Professor Neher. [Not given, 1917-1918.]

514. Organic Chemistry. Lectures upon special topics, accompanied by the reading and discussion of the literature. Second term, 3 hours a week. Prerequisite courses: Organic Chemistry, Parts I, II, and III, or equivalent. Professor Neher. [Not given, 1917-1918.]

515, 516. Advanced Laboratory work in Organic Chemistry. The work done in connection with these courses may involve advanced preparations, organic analysis, or research according to the advancement or preference of the student. Both terms, 3 hours a week. This course will consist of at least 9 hours of laboratory work a week. Professor Neher.

517, 518. Electrochemistry. Lectures on the historical

development of the subject accompanied by laboratory work on Faraday's Law, conductivity, transference numbers and electromotive forces. Two lectures and laboratory work involving at least 3 hours. Both terms, 3 hours a week. Professor Hulett. [Not given, 1917-1918.]

519. Chemistry of Colloids. Study of the colloidal state, preparation and physical properties of colloidal solutions, theories of colloids, coagulation and stabilization, peptization, protective action, catalysis, reactions in gels, imbibition. First term, lectures and laboratory work, 3 hours a week. Dr. Goss or Professor Hulett. [Not given, 1917-1918.]

520. Surface Energy and Colloids. Study of surface energy, the nature of solids and liquids in their application to colloidal solutions. This course will consist of two lectures and one laboratory period. Second term, 3 hours a week. Professor Hulett. [Not given, 1917-1918.]

521. Photochemistry and the Chemistry of Radiant Energy. Lectures and reading on the chemical reactions produced by light and radio-active energy, with recent developments in theory and practice. First term, 3 hours a week. Professor Taylor. [Not given, 1917-1918.]

522. Physical Chemistry. Lectures and reading devoted largely to chemical equilibrium and the energy side of chemical reactions, accompanied by lectures on chemical thermodynamics. Both terms, 3 hours a week. Professor Hulett (first term) and Professor Taylor (second term). [Not given, 1917-1918.]

523, 524. Research in Physical Chemistry. The research to take any of the following directions: Equilibrium

studies, determination of physico-chemical constants, colloids and suspensions. Both terms, hours to be arranged. Professor Hulett. [Not given 1917-1918.]

525, 526. Research in Electrochemistry. Standard cells, the coulometer, concentration cells, amalgams, the nature of electrodeposits and decomposition potentials. Both terms, hours to be arranged. Professor Hulett. [Not given, 1917-1918.]

527, 528. Research in Physical Chemistry. Phase rule, catalysis, free energy studies, and photochemical reactions. Both terms, hours to be arranged. Professor Taylor. [Not given, 1917-1918.]

SEMINARY IN PHYSICAL CHEMISTRY

Reading and discussions of selected authors and topics. Both terms, hours to be arranged. Professor Hulett and Professor Taylor. [Not given, 1917-1918.]

For undergraduate courses in Chemistry also listed as graduate courses, see page 311.

GEOLOGY

All the graduate courses offered by this Department are adjustable to the needs of individuals or small groups of students, and the subject-matter and method of presentation may be modified to meet various conditions.

A candidate for a degree may devote a considerable portion of his time to one of the courses, supplementing the regular work by the investigation of some special problem which will afford the material for his thesis.

Every candidate for a higher degree in Geology is re-

quired to take the senior course in Practical Geology, 405, 406, during the first year of his attendance and to meet all the requirements of that course.

501, 502. Chemical Geology. Composition of the earth and the chemistry of geological processes. Relative abundance, distribution and association of the chemical elements; genesis and alterations of minerals; metamorphism; weathering and chemical denudation; lake and river waters; underground waters and gases, magmatic and meteoric; evolution of the ocean and the atmosphere; the geological effects of radioactivity. Both terms, 3 hours a week. Professor Smyth.

503, 504. Stratigraphy. Lecture, field, and laboratory work, leading to the study and description of the stratigraphy and tectonics of some particular district, or of the stratigraphy and palaeontology of some sedimentary formation. Both terms, continuing through one or more years, 3 or more hours a week. Professor van Ingen. [Given as a research course, 1917-1918.]

505, 506. Petrology. A general study of the igneous, sedimentary, and metamorphic rocks, followed by the detailed investigation of some problem in regard to their origin and relations. Laboratory, library, and field work continuing through one or more years, 3 or more hours a week. Professor Smyth.

507, 508. Mineralogy. The paragenesis and chemical relations of minerals, and the study of crystallographic types, with measurement and projection of crystal forms and the determination of their physical constants. Both terms, 3 or more hours a week. Professor Phillips.

509, 510. Geological History of Man. Lectures, reading, and discussion of original memoirs bearing upon the origin and geological history of man. Both terms, 3 or more hours a week. Professor Sinclair.

511, 512. (Biology 511, 512). Vertebrate Palaeontology. Lectures and laboratory work on the morphology and evolution of fossil vertebrates. Both terms, 3 or more hours a week. Professors Scott and Farr.

513, 514. Economic Geology. The metalliferous and nonmetalliferous mineral deposits of economic importance. Their character, distribution, origin and relations, and the problems which they present. Laboratory, library, and field work continuing through one or more years, 3 or more hours a week. Professor Smyth.

515, 516. Invertebrate Palaeontology. Morphology and evolution of the more important groups of extinct invertebrates. Lectures, laboratory, and field work. Both terms, 3 or more hours a week. Professor van Ingen. [Given as a research course, 1917-1918.]

502. Physical Geography. The relations of geography and history are shown by a series of lectures and conferences on the effect of environment upon the development of mankind, physically, socially, and commercially. Second term, three hours a week. Professor Libbey.

For undergraduate courses in Geology also listed as graduate courses, see page 311. Courses so taken will be modified and augmented to suit the proficiency of the applicants. More detailed information regarding the graduate work in Geology may be obtained from the Secretary of the Department.

BIOLOGY

501. Cytology. Lectures, laboratory and research work on protoplasm; the structures and functions of cells; nuclear and cell division; origin and maturation of the germ cells. First term, 3 hours a week. Alternates with course 517. Professor Conklin.

502. Ontogenesis. Lectures, laboratory and research work on the fertilization, cleavage and promorphology of the egg; phenomena of differentiation; problems of experimental embryology; the cellular basis of heredity and evolution. Second term, 3 hours a week. Alternates with course 518. Professor Conklin.

503. Comparative Histology and Histogenesis. Studies of supporting, nutritive, excretory, respiratory and several other groups of tissues, including their origin and development, repair, regeneration and metamorphosis. Lectures, laboratory and research work. First term, 3 hours a week. Professor Dahlgren.

504. Histology of the Kinetic and Nerve Tissues. Comparative studies of the organs and tissues which produce light, heat, motion, and electricity; the tissues of nervous sensation, communication, and stimulation; the organization of nerve tissues in several animal forms. Lectures, laboratory and research work. second term, 3 hours a week. Professor Dahlgren.

505. Morphology of the Organ Systems of Vertebrates. Conferences, laboratory, and research work on the comparative anatomy and development of the organ systems of vertebrates. About 3,000 anatomical preparations and an embryological collection of about 1,200 series are at present available for reference and

study in connection with this course. First term, 3 hours a week. Professor McClure.

506. Special Problems of Vertebrate Anatomy. Conferences, laboratory, and research work. This course is designed to place the student in a position to comprehend the main problems of vertebrate morphology and completes the study of the comparative anatomy and development of the organ systems of the anamnia and amniota. Second term, 3 hours a week. Professor McClure.

507. The Development of Plant Life. Studies in the structure, life-history, and taxonomy of various groups of plants. First term, 3 hours a week. Professor Rankin.

508. Systematic Botany of the Vascular Plants. Structure as related to description and classification. Exercises in plant analysis, description and classification. The characters of the larger families of Angiosperms. Second term, 3 hours a week. Professor Rankin.

510. Theories of Evolution. A history of the doctrine of evolution, with discussion of the theories which have been proposed to explain the modes and factors of development. Second term, 3 hours a week. Professor Scott. [Not given, 1917-1918.]

511, 512. (Geology 511, 512.) Vertebrate Palaeontology. Lectures and laboratory work on the morphology and evolution of fossil vertebrates. Both terms, 3 or more hours a week. Professors Scott and Farr. [Not given, 1917-1918.]

513, 514. Physical Chemistry of the Cell. An application of the principles of physical chemistry to physiological problems. The rôle of diffusion, osmotic pressure, electrolytic dissociation, reaction velocity, catalytic action and surface tension in organisms, the

properties of colloids, the effect of salt on cells, and the permeability of cells and tissues will be studied in considerable detail. Based on Philip's *Physical Chemistry,* and Hoeber's *Physikalische Chemie der Zelle und Gewebe,* (third edition). Both terms, 3 hours a week. Professor Harvey. [Not given, 1917-1918.]

515, 516. Morphology and Physiology of the Central Nervous System. A series of conferences with graduate students, together with assignments of problems and direction of research work in the field of Neuro-Biology. Both terms, numbers of hours indefinite. fessor Conklin.

517, 518. Normal and Experimental Embryology. A study of the principles of development and of embryonic differentiation. The work is both observational and experimental and includes a study of normal life-histories as well as experimental studies on the factors of differentiation and development. Important books and original publications dealing with the subject are assigned for study. Both terms, 3 hours a week. Alternates with courses 501, 502. [1918-1919.] Professor Conklin.

519, 520. Preparation of Biological Compounds. The isolation and purification of typical proteins, lipoids, carbohydrates, and extractives from plant and animal tissues. Open to students having some experience in Biological Chemistry. Matthews: *Physiological Chemistry.* Both terms, 3 or more hours a week. Professor Harvey. [Not given, 1917-1918.]

521, 522. Research in Genetics. The investigation of problems in variation and heredity of plants and animals, with assigned readings and conferences. Open to

students fully qualified by previous training. Both terms, 3 or more hours a week and extending through the summer season. Professor Shull.

For undergraduate courses in Biology also listed as graduate courses, see page 311.

COURSES IN PRINCETON THEOLOGICAL SEMINARY

The following courses in Semitics and Greek, given in Princeton Theological Seminary, are open to duly qualified students of Princeton University:

1. *Hebrew, 4 hours, both terms, Dr. Wilson and Dr. Allis. In two divisions, Dr. Wilson teaching the advanced division. At 4-5 or 5-6 on Monday, Tuesday, Thursday and Friday. Open to Seniors and graduates.
2. Syriac or Arabic, 2 hours, both terms. Dr. Allis. Time to suit the class and Professor. Open to graduate students only. To be taken in combination with one of the following:
   (a) Hebrew Syntax, 1 or 2 hours, both terms. Dr. Wilson. One hour if only theoretical; 2 hours if practical also.
   (b) Advanced Hebrew, 1 or 2 hours, both terms. Dr. Wilson or Dr. Allis.
   (c) Textual Criticism, 1 or 2 hours, both terms. Knowledge of Greek and Latin required. Dr. Wilson.
3. General Introduction to the New Testament and Exegesis of the Epistle to the Galatians. Open to graduate students only. Two hours, both terms. Dr. Armstrong and Dr. Machen. (Thursday and Friday

at 9:30). Together with Introduction to the Epistles of St. Paul. One hour, both terms. Thursday at 10:30. Dr. Armstrong.

*UNDERGRADUATE COURSES ALSO LISTED AS GRADUATE COURSES

PHILOSOPHY

401. Fundamental Problems of Philosophy. Senior course, first term, 3 hours a week. Professor Fite.

402. Present Philosophical Tendencies. Senior course, second term, 3 hours a week. Professor Spaulding.

405. History of Greek Philosophy. Senior course, first term, 3 hours a week. Professor Bowman.

407, 408. Ethics. Senior course, both terms, 3 hours a week. Professor Fite.

---

401. History and Psychology of Education. Senior course, first term, 3 hours a week. Professor McComas.

407. History of Modern Science. Senior course, first term, 3 hours a week. Professor Spaulding.

HISTORY AND POLITICS

401. Constitutional History of England to the close of the Middle Ages. Senior course, first term, 3 hours a week. Professor Munro.

402. Constitutional History of England since the Middle Ages. Senior course, second term, 3 hours a week. Professor Shipman.

403, 404. American History. Senior course, both terms, 3 hours a week. Professors Wertenbaker and C. R. Hall.

405. Municipal Government in the United States. Senior course, first term, 3 hours a week. Professor Ford.

406. Federal and State Government. Senior course, second term, 3 hours a week. Professor Ford.

407, 408. International Law and Diplomacy. Senior course, throughout the year, 3 hours a week. Professor Brown.

409, 410. Constitutional Interpretation and Administrative Law. Senior course, both terms, 3 hours a week. Professor Corwin.

421, 422. (Classics 421, 422.) Roman Law. Senior course, both terms, 3 hours a week. Professor Westcott.

ECONOMICS

409. Money and Banking. For graduate students electing this course a supplementary list of readings is provided, and a weekly conference is held. Senior course, first term, 3 hours a week. Professor Kemmerer.

410. Public Finance. For graduate students electing this course, a supplementary list of readings is provided, and a weekly conference is held. Senior course, second term, 3 hours a week. Professor Kemmerer.

ART AND ARCHAEOLOGY

401. Renaissance and Modern Sculpture. Senior course, first term, 3 hours a week. Professor Morey.

402. Greek Sculpture. Senior course, second term, 3 hours a week. Professor Morey.

405. The Revival of Painting in Italy. Senior course, first term, 3 hours a week. Professor Morey.

406. Northern Painting. Senior course, second term, 3 hours a week. Mr. Friend.

407, 408. Classical Architecture. Senior course, both terms, 3 hours a week. Professor Butler.

CLASSICS

401. Lucretius. *De Rerum Natura.* Senior course, first term, 3 hours a week. Professor Basore.

413. Tacitus. The Histories. Senior course, first term, 3 hours a week. Professor Westcott.

416. Aristotle. Senior course, second term, 3 hours a week.

416*a*. Thucydides. (Alternate of Aristotle 416.) Senior course, second term, 3 hours a week.

421, 422. Roman Law. Senior course, both terms, 3 hours a week. Professor Westcott.

SANSKRIT

401, 402. Elementary Sanskrit. Senior course, both terms, 3 hours a week. Professor Robbins.

ENGLISH

401. Eighteenth Century Literature. Senior course, first term, 3 hours a week. Professor Root.

403. English Romanticism. Senior course, first term, 3 hours a week. Professor Spaeth.

404. English Literature of the Victorian Period. Senior course, second term, 3 hours a week. Professor Noyes.

405, 406. Old English. Senior course, both terms, 3 hours a week. Professor Hunt.

MODERN LANGUAGES

GERMANIC

401, 402. The Romantic School in Germany. Senior course, both terms, 3 hours a week. Professor Hoskins.

403, 404. Middle High German. Senior course, both terms, 3 hours a week. Professors Hoskins and Priest.

ROMANIC

401, 402. The Romantic Movement. Senior course, both terms, 3 hours a week. Professor Gauss.

403, 404. Old French. Senior course, both terms, 3 hours a week. Professor Buffum.

405. French Literature of the Eighteenth Century. Senior course, first term, 3 hours a week. Professor Stuart.

406. French Literature of the Sixteenth Century. Senior course, second term, 3 hours a week. Professor Vreeland.

407. Italian Literature. Senior course, both terms, 3 hours a week. Professor Koren.

409, 410. Spanish Literature. Senior course, both terms, 3 hours a week. Professor Marden.

MATHEMATICS

403, 404. Differential Geometry. Senior course, both terms, 3 hours a week. Professor Eisenhart.

405, 406. Algebra. Senior course, both terms, 3 hours a week. Professor Fine.

407, 408. Projective Geometry. Senior course, both terms, 3 hours a week. Professor Eisenhart.

409, 410. Analysis. Senior course, both terms, 3 hours a week. Professor Fine.

PHYSICS

411, 412 *c*. Electricity and Magnetism. Senior course, both terms, 3 hours a week. Professor Adams.

413, 414 *d*. Theoretical Physics. (a) Thermodynamics; (b) The Electron Theory. Senior course, both terms, 3 hours a week. Professors W. F. Magie and Compton.

415, 416 e. Experimental Physics: Electricity and Mag-

netism. Senior course, both terms, 3 hours a week. Professor Northrup.

CHEMISTRY

402. Quantitative Analysis, Part III. Senior course, second term, 3 hours a week. Professor McCay.

404. Organic Chemistry, Part III. Senior course, second term, 3 hours a week. Professor Neher.

406. Physical Chemistry, Part III. Senior course, second term, 3 hours a week. Professor Hulett.

410. Advanced Inorganic Chemistry. Senior course, second term, 3 hours a week. Professor Menzies.

GEOLOGY

401, 402. Historical Geology. Senior course, both terms, 3 hours a week. Professors Scott and van Ingen.

403. Structural and Dynamic Geology. Senior course, first term, 3 hours a week. Professor Smyth.

404. Economic Geology. Senior course, second term, 3 hours a week. Professor Smyth.

405, 406. Practical Geology. Senior course, both terms, 3 hours a week. Professor van Ingen.

407. Crystallographic Mineralogy. Senior course, first term, 3 hours a week. Professor Phillips.

408. Optical Mineralogy. Senior course, second term, 3 hours a week. Professor Phillips.

BIOLOGY

401. Comparative Anatomy of Vertebrates. Senior course, first term, 3 hours a week. Professor McClure and Mr. Silvester.

402. Vertebrate Embryology. Senior course, second term, 3 hours a week. Professor McClure and Mr. Silvester.

403. Histology. Senior course, first term, 3 hours a week. Professor Dahlgren.

404. Advanced Histology, and Neurology. Senior course, second term, 3 hours a week. Professor Dahlgren.

406. Vertebrate Palaeontology. Senior course, second term, 3 hours a week. Professors Scott and Farr.

407, 408. General Physiology. Senior course, both terms, 3 hours a week. Professor Harvey.

409, 410. Genetics. Senior course, both terms, 3 hours a week. Professor Shull.

ASTRONOMY

401, 402 *f*. Celestial Mechanics. Senior course, both terms, 3 hours a week. Professor Russell.

DIRECTORS OF THE SEMINARIES

1917-1918

Philosophical Seminary
Professor Longwell

History and Politics Seminary
Professor Shipman

Economics Seminary
Professor Kemmerer

Classical Seminary
Professor D. R. Stuart

English Seminary
Professor Gerould

Romance Seminary
Professor Marden

Germanic Seminary
Professor Priest

Mathematical Seminary
Professor ———

DEPARTMENT OF MUSIC

ALEXANDER RUSSELL, MUS. B., *Director of Music and University Organist*

The aim of the Department of Music is to cultivate a knowledge of music among the students of the University by means of extra-curriculum courses of lectures on musical subjects, recitals, and by the encouragement of student activities in music, particularly as evidenced in the student musical organizations, such as the Chapel Choir, the Glee Clubs and the student orchestra.

Emphasis is laid upon the development of taste and appreciation rather than upon the purely technical side of music. The courses offered are planned along lines of general academic training, and it is not the aim of the Department to develop professional musicians, but rather trained listeners of music, men who shall appreciate and understand music in the same degree as they appreciate and understand other arts.

At the same time, students who evidence special talent in any particular phase of music, (as singers, pianists, organists, violinists, composers, etc.), will be given the opportunity, in so far as it does not interfere with regular University schedules, to pursue studies in these branches, by means of special arrangements made through the Department.

The following extra-curriculum courses are at present available to all students without tuition fees:

1. A course of weekly Saturday afternoon organ recitals on the Henry C. Frick organ in Procter Hall. From Thanksgiving to Easter. Programs covering the literature of music from ancient to modern times.

2. A course in the History and Appreciation of Music (from the standpoint of the listener) weekly from October to June. Illustrated by instrumental and vocal music. No knowledge of music necessary for entrance to course.

3. A course in the Theory of Music (Harmony). Students desiring to take this course will be required to pass an examination in the rudiments of music. Weekly one hour.

The plans of the Department include other extensions of the above courses, as soon as the occasion for them shall arise. Among these are courses in:

Counterpoint
Simple Composition
Advanced Composition
Analysis of Compositions and Form
Orchestration
Ensemble Playing.

THE UNIVERSITY LIBRARY

ERNEST CUSHING RICHARDSON, PH.D., *Librarian*
HENRY BARTLETT VAN HOESEN, PH.D., *Assistant Librarian*
ANSON ELY MORSE, PH.D., *History Reference Librarian*
HOWARD SEAVOY LEACH, A.M., *Acting Reference Librarian*
CHARLOTTE MARTINS, *Superintendent of Purchase*
GEORGE MANN PECK, A.B., *General Assistant in Charge of Special Libraries*
WALTER RUE COTTRELL, *Superintendent of Circulation*
DAVID WALTER DUFFIELD, *Superintendent of Printing and Binding*

CLAUDE H. ANDERSON, A.B., LL.B., *Municipal Reference Librarian*
JANE WRIGHT, *Art Reference Librarian*
REBECCA SARAH CAWLEY, *Department Librarian, Guyot Hall*
FLORENCE LOUISE HURD, *Department Librarian, Economics*

THE UNIVERSITY LIBRARY

The Library began with the College, Governor Belcher, the patron of the College, directing his especial attention and interest to it, and leaving to it his collection of 474 volumes. When the first catalogue was printed in 1760, the Library consisted of about 1,300 volumes. It was increased largely in the sixties, but was decimated during the Revolution and in 1796 numbered only 2,300 volumes. It was partly destroyed by fire in 1802, but shortly afterward its size was fully restored by gifts. In 1816 it numbered 7,000 volumes; in 1839, 8,000; and in 1850 it had advanced to 9,313 volumes. In 1868 it contained but 14,000 volumes, without separate building or librarian.

THE CHANCELLOR GREEN LIBRARY

In 1868 the Elizabeth Fund for the purchase of books was created by John C. Green, Esq., and soon afterward he erected a library building (in 1872-73) named in honor of Chancellor Green. The Chancellor Green Library building

is the working library of the University for undergraduates. It contains the standard and latest works, as well as reference books, in all departments. In addition the Chancellor Green Library contains the following special collections:

The Charles Ewing Green Alcove. The alcove facing the public entrance to the Chancellor Green Library has been set aside as a memorial to the late Charles Ewing Green, LL.D., for many years a Trustee of the University, and, as the administrator of the John C. Green estate, one of Princeton's most generous and consistent benefactors. To commemorate the active interest which he always took in the Chancellor Green Library as well as in the general library development of the University, the late Mrs. Charles E. Green erected in this alcove a memorial tablet, and placed upon the shelves books on classical philology. There are 3,411 volumes in this collection.

The Class of 1878 Library of Chemistry, established and endowed in 1889, numbers 268 volumes, distributed among the collections relating to this subject. Location: alcoves Y and Z, gallery.

The Class of 1883 Library of Political Science and Jurisprudence, founded and endowed in 1893, contains 1,088 volumes. Location: alcove X, gallery.

The Class of 1889 Library of American History, established and endowed in 1899, contains 1,385 volumes. Location: alcove C, main floor.

The Bower Collection, a selection of books mainly on History and Literature from the library of the late Laurance Foster Bower '96, contains 3,489 volumes. Location: alcove G, main floor.

Provision was made on the occasion of the Sesquicentennial by the late Mrs. Percy Rivington Pyne, for a new building with a capacity of 1,200,000 volumes gross and

shelving at present for about 750,000, besides administration rooms, twenty rooms for instruction and research, a room for the exhibition of rare books, and a series of rooms for special reading and reference work in History, Political Science and Social Sciences. This building, of Longmeadow stone, in the Oxford Gothic style, forms a hollow quadrangle of about 160 feet square, connected with the Chancellor Green Library by a delivery room, of 50 by 20 feet. It is fitted with modern improvements in heating, ventilation, stacks, electric elevators, interior telephone, etc. On the exterior of the western tower gateway are statues of President Witherspoon and President McCosh, James Madison, Class of 1771, fourth President of the United States, and Oliver Ellsworth, Class of 1766, second Chief Justice of the United States Supreme Court.

THE CENTRAL COLLECTION

The general collection, which occupies the united buildings, consists of 397,126 volumes, including deposits, and 100,086 unbound periodicals and pamphlets. It includes, in addition to those already mentioned, the following special collections:

SPECIAL COLLECTIONS

The Autograph-Manuscript Collection, relating chiefly to the history of the University. This includes the Pyne-Henry collection, the Abbott papers, the Hunt papers, the Miller papers, the Maclean papers, recently presented by the Misses Maclean, and miscellaneous, 8,083 documents. Location: exhibition room and north stack, fourth stack.

The Morgan Collection of Virgils, presented by Junius S. Morgan, Esq., '88. 672 volumes. Location: exhibition room.

The Pierson Civil War Collection, presented by John S. Pierson, '40. 6,720 volumes; 2,580 unbound pamphlets, including also several thousand clippings. Location: north stack, fourth floor.

The Paton Spanish War Collection of newspapers and magazines, presented by William Agnew Paton, Esq. Seventy volumes. Location: north stack, fourth floor.

The European War Collection consisting of 5,574 books and pamphlets, together with newspapers, relating to the European war. Location: south stack, fourth floor.

The John W. Garrett European War Collection, consisting of 216 French, British, and Italian War Posters, together with military correspondence, forms, etc. Location: exhibition room.

The Lytle Collection of European War Relics, consisting of 210 items. Location: exhibition room.

The Princeton University Collection, including the large collection of Princetoniana presented by Professor William Libbey, '77, the Witherspoon collection (259 volumes) and the Cleveland collection (132 volumes). 7,897 volumes. Location: north stack, fourth floor.

The Class of 1875 Library of English Poetry and Drama. 2,772 volumes, distributed among the collections relating to these subjects.

The Mrs. J. O. H. Pitney Collection of International Law and Diplomacy, presented by Mrs. John Oliver Halsted Pitney, consisting of 311 volumes. Location: south stack, third floor.

The Music Library, founded by Rudolph E. Schirmer, '80, John W. Garrett, '95, and Lewis F. Pease, '95. 3,997 volumes and about 3,700 pieces of sheet music, located in alcove R, Chancellor Green Library, and north stack, third floor.

The Garrett Collection of Oriental Manuscripts, con-

sisting of about 2,400 manuscripts, chiefly in Arabic, but including 334 manuscripts in twenty-five other languages, *e.g.*, Latin, Greek, English, Persian, Pali, Javanese, Chinese, Japanese, etc., deposited in the University Library. This collection is most exhaustive and includes books on law, medicine, mathematics, natural sciences, poetry, history, biography, geography, travels, rhetoric, grammar, and lexicography, as well as words on the Mohammedan religion and the exegesis of the Koran. Location: northwest corner, second floor.

The Collection of Cuneiform Documents, consisting of approximately 520 items at the time of its foundation by M. Taylor Pyne, '77, Junius S. Morgan, '88, and others; and enlarged in 1913 by 623 tablets presented by Professor R. E. Brünnow, Robert Garrett, '97, Cyrus H. McCormick, '79, Russell W. Moore, '83, M. Taylor Pyne, '77, and others; and by thirty-five tablets presented by Wilfred J. Funk, '09 and George W. Gilmore, '83. Location: exhibition room.

The Willard Porter Law Library, presented by Mrs. Willard Hall Porter and her son, W. H. Porter, Jr., 1903. 1,800 volumes. Location: north stack, fourth floor.

The Pliny Fisk Statistical Library, presented by Pliny Fisk '81, consisting of about 5,408 volumes, 14,585 pamphlets, 44,147 broadsides, letters, etc., and several hundred thousand clippings mounted on 76,305 classified sheets. Location: southeast corner, fifth floor.

The Samuel Miller Collection, presented by Samuel Miller Breckinridge Long, 1903, in memory of Judge Samuel Miller Breckinridge, '50. 1,200 volumes distributed through related subjects.

The Patterson Collection, consisting of 792 Horaces and 310 other rare and choice books, presented by Robert W. Patterson, Esq., '76. Location: exhibition room.

The Bergen Collection, consisting of 179 rare and choice books, chiefly modern, presented by the Rev. G. S. Bergen in memory of his son, Ernest G. Bergen, '95. Location: north stack, fourth floor.

The Ivy L. Lee Collection, consisting of about 85 books on Russia, presented by Ivy L. Lee, '98. Location: north stack, first floor.

The Whig Hall Collection, consisting of 4,254 volumes, presented by Whig Hall, distributed through related subjects.

The Clio Hall Collection, consisting of 3,432 volumes, presented by Clio Hall, distributed through related subjects.

The Philadelphian Society Collection, consisting of 1,360 volumes, presented by the Philadelphian Society, distributed through related subjects.

The Nelson Collection of New Jerseyana, consisting of 2,520 volumes and pamphlets relating to the history of New Jersey, presented by the Hon. William Nelson. Location: north stack, fourth floor.

The Collection of New Jersey Imprints, consisting of 258 volumes, presented by the Hon. William Nelson. Location: north stack, fourth floor.

The Collection of Books for the Blind, consisting of 95 volumes, English, Greek, and Latin, printed in American Braille and New York Point. Location: north stack, fourth floor.

The Paton Collection of Oriental Philology and History (See "Semitic Seminary" under "Seminary and other Special Libraries.")

Special collections, other than books or manuscripts, are:

The Garrett Collection of Coins, deposited in the University Library. This collection, embracing also specimens from many foreign countries, contains an unusually fine series of American coins. In addition to the coins that have been used for money the collection includes many medals commemorative of notable historic events and persons.

The Hutton Collection of Death Masks, consisting of 81 masks, presented by the late Laurence Hutton, A.M. Location: exhibition room.

The Hutton Memorial Collection, consisting of 801 books, together with autographed portraits, paintings, etc., from the library of the late Laurence Hutton, A.M. This collection was left by Mr. Hutton to trustees to be put in some safe place for a permanent memorial and was presented by them to the University. Location: exhibition room.

The Meirs Collection of Cruikshankiana, consisting of 894 volumes of Cruikshankiana, with 695 broadsides, original water color drawings, oil paintings, autograph letters, etc., presented by Richard W. Meirs, '88. The editions are unusually choice as to condition; the unique drawings and manuscripts numerous and of historical importance. Location: exhibition room.

The Photostat Collection, consisting of 37 volumes in photostat copy. Positives are distributed through related subjects. Negatives are located in the Photostat department, southeast corner, basement.

SEMINARY AND OTHER SPECIAL LIBRARIES

Certain rooms in the Pyne Library Building are available for the use of the seminaries, organized under the rules of the Faculty for "the development among our higher students of independent scholarly ability by extensive advanced study and training in the methods of original research." Several rooms have been assigned and provided with special libraries, partly by loan from the main collection, but chiefly by special endowment and purchase. The following have been established:

The Philosophical Seminary. Founded by Mrs. C. B. Alexander (ethics), and by the Class of 1882 (logic and

metaphysics). 2,019 volumes; 1,547 theses. Location: southeast corner, first floor.

The Economic Seminary. Founded by the Class of 1888. 4,926 volumes, 11 theses and the Pliny Fisk Statistical Library. Location: southeast corner, first floor, and fifth floor. (See "The Pliny Fisk Statistical Library," under "Special Collections.")

The Political Seminary. Founded by various alumni and friends. 2,442 volumes. Location: southeast corner, second floor.

The Classical Seminary. Founded by a friend of the University. 8,435 volumes; 22,497 theses. The Classical seminary at present occupies five rooms in the southwest corner of the building.

The Latin Pro-Seminary. 200 volumes. Location: Room 43, McCosh Hall.

The English Seminary. Founded and supported by Charles Scribner, Esq., '75. 3,076 volumes; 1,150 theses. Location: northwest corner, first floor.

The Romance Seminary. Founded by the Class of 1890. 3,729 volumes; 1,825 theses. Location: southwest corner, first floor.

The Mathematical Seminary. Founded by the late John L. Cadwalader, '56; Professor M. Allen Starr, M.D., LL.D., '76; David B. Jones, Esq., '76; Thomas D. Jones, Esq., '76; Chandler W. Riker, Esq., '76; and the Hon. Adrian Riker, '79. 3,346 volumes, 2,115 theses. Location: northwest corner, second floor.

The Historical Seminary. Founded by Mr. and Mrs. M. Taylor Pyne in memory of Robert Stockton Pyne. 4,083 volumes; 14 theses. Location: southeast corner, second floor.

The Germanic Seminary. Founded by the Class of 1891, and including the library of the late Professor Willard

Humphreys. 3,370 volumes; 1,827 theses. Location: southeast corner, first floor.

The Semitic Seminary. 6,473 volumes, including the Paton Collection of Oriental Philology and History, of 2,640 volumes, deposited by David Paton '74. Location: north stack, west tower, fifth floor, and room adjoining.

DEPARTMENT LIBRARIES

These are libraries selected from the general collection. and kept in proximity to the corresponding laboratories. The following are organized:

Art; the Marquand Collection, presented by Professor Allan Marquand, '74, consisting of 6,896 volumes on the history of art. In the Art Museum.

Astronomy; consisting at present of 1,655 volumes and 603 theses. In the Working Observatory.

Biology (including Botany and Zoölogy); founded by Charles W. McAlpin, '88, and supported largely by Mr. McAlpin and the "Frank Hartley Memorial Fund." 6,168 volumes; 305 theses. In Guyot Hall.

Geology and Palaeontology; 7,398 volumes and 654 theses. In Guyot Hall.

Engineering; including the Class of 1878 Library of Engineering; 957 volumes. In the School of Science Building, second floor.

Physics; the Brackett Library, presented by the late Stephen S. Palmer, David B. Jones '76 and Thomas D. Jones '76; containing 2,355 volumes; 15 theses. In Palmer Physical Laboratory.

USE OF THE LIBRARY

The Library is open from 8 A. M. to 10 P. M. on weekdays and, for reference use, from 12 M. to 5 P. M. on Sundays during term time. In vacation it is open on week days from 9 A. M. to 1 P. M.

Books may be drawn by all officers and students of the University and Theological Seminary, and by any person properly introduced. The number of books which may be taken is limited to three in the case of undergraduates, with the exception of seniors, who may take five. Officers, Fellows, and graduate students may take any reasonable number. Books may be kept by undergraduates for two weeks, by Fellows and graduate students for four weeks, and by officers for any reasonable time. All books may be renewed when due, unless wanted by some one else.

Fines are charged at the rate of two cents a day on all books kept overtime. If an overdue book is wanted at the Library for any reason, it may be sent for and a charge of ten cents for messenger made. Postal cards are sent as a reminder of books over due only when the books are wanted by others. No books may be drawn while there are unpaid fines.

A pamphlet manual of rules and directions is issued free of charge.

THE HALL LIBRARIES

The American Whig and Cliosophic Societies and the Philadelphian Society have turned over a large part of their books to the University Library, but each has in its own building a convenient working library.

THE THEOLOGICAL SEMINARY LIBRARY

Students of the University are allowed to use the library of the Princeton Theological Seminary, which contains 103,400 volumes, distributed in two buildings. The one, the general library, is open for consultation and loan of books from 9 A. M. to 5 P. M. and from 7 to 10 P. M. on week-days, except Saturday, when the hours are from 9 A. M. to 1 P. M. and from 7 to 10 P. M. The other, the reference

library, is open every week-day from 9 A. M. to 5 P. M., and from 7 to 10 P. M.

SUMMARY OF LIBRARIES

University Library	397,126
Hall Libraries	5,000
Theological Seminary Library	103,400
Total (exclusive of pamphlets and duplicates)	505,526

PART VI

UNITED STATES SCHOOL OF MILITARY AERONAUTICS

UNITED STATES SCHOOL OF MILITARY AERONAUTICS

The War Department, having accepted the offer of the University's buildings and equipment, early in June 1917 designated Princeton as one of the Government Schools of Military Aeronautics, and the School was opened in July.

ADMINISTRATION AND FACULTY

JOHN GRIER HIBBEN, PH.D., LL.D., LITT.D., *President of Princeton University.*

GEORGE C. WINTRINGER, E.E., *Secretary of Business Administration, Princeton University.*

HENRY GREEN DUFFIELD, *Treasurer of Princeton University.*

DANA H. CRISSY, Major, A. S., S. C., *Commandant.*

GILBERT VAN INGEN, *President of Academic Board.*

C. W. HANDY, 1st Lt., A. S., S. C., U. S. R., *Adjutant.*

J. D. BEGGS, 1st Lt., A. S., S. C., U. S. R., *Supply Officer.*

BENJAMIN F. HOWELL, *Vice President of Academic Board.*

DAVID A. MCCABE, 1st Lt., A. S., S. C., U. S. R., *Head of Department of Military Studies.*

WALTER VAN B. ROBERTS, 1st Lt., A. S., S. C., U. S. R., *Head of Signalling and Radio.*

CYRIL J. BEDALE, *Head of Gunnery.*

WENDELL W. BROWN, *Head of Aids to Flight.*

ROSWELL DAVIS, *Head of Airplanes.*

KENNETH H. CONDIT, 1st Lt., A. S., S. C., U. S. R., *Head of Engines.*

EDWARD SAMPSON, 1st Lt., A. S., S. C., U. S. R., *Head of Aerial Observation.*

GEORGE R. MCPHERRIN, *Instructor in charge of Miniature Range.*

JARVIS CROMWELL, *Chief Drill Instructor.*

VAN R. HALSEY, *Instructor in Calisthenics.*

ORMOND L. PIERSON, *Supply Clerk in Office of President of Academic Board.*

The curriculum provides for an eight weeks' course of instruction in those subjects which are considered fundamental to the training of an aviator.

The subjects are arranged by departments, of which there are seven, as indicated in the above list of Heads of Departments.

The course is divided into two Wings:

A Junior Wing of three weeks duration, in which stress is laid upon instruction in Military Studies (i.e Army Regulations, Military Law, Military Sanitation and Hygiene, Organization of Armies, etc.) and in Machine Gunnery and Telegraphy, together with practical work in Military Drill.

The Senior Wing, comprising the last five weeks of the course, is devoted more particularly to lectures and laboratory work on Signalling, Gunnery, Aerial Tactics, Bombs and Bombing, Theory of Flight, Cross Country Flying, Map Reading, Meteorology, Night Flying, Instruments and Compasses, Construction Nomenclature, Rigging, Care and Repair of Airplanes, the principles of Internal Combustion Engines and their Construction, and finally instruction in methods of cooperation between the Aircraft and Artillery and Infantry.

The total number of hours of instruction in the course is 312; that is, 39 hours a week of actual instruction, inclusive of lectures, laboratory and drill. The work is of an intensive nature, designed to give the candidate for an Aviation Pilot's license a thorough training in the various branches which will be included in his daily work as an aviator. No instruction whatever is given in practical flying, that being reserved for the Aviation Schools.

Written examinations are held in certain subjects at the end of the third week, and a cadet who fails in one of these examinations is not allowed to pass on into the Senior Wing.

Toward the end of the Senior Wing written examinations are given in all subjects.

The schedule calls for a seven hour day of class work, including drill, excepting on Saturday, the hours of duty being from 5.30 A. M. to 9.30 P. M., with only short periods for recreation.

On satisfactory completion of the course, the cadet is certified as having graduated satisfactorily or with honor.

The cadets, who are under strict military discipline, are ordered here on active duty as first class privates in the Signal Enlisted Reserve Corps.

The instruction is given at present in certain rooms of the School of Science, the C. E. Laboratory, Palmer Hall, and Guyot Hall; while a room in Brokaw Memorial, certain facilities of the Gymnasium, and portions of the University Library are open to the cadets for purposes of reading, exercising, and recreation.

The School was opened July 2nd, 1917, has increased from a small beginning to its present size, and will be increased still more in the future; and in order to meet the increased demands, new buildings of a semi-permanent nature are being erected to the southward of Guyot Hall.

The cadets are housed in certain of the University dormitories assigned to the School of Military Aeronautics for use as barracks, and they are fed in certain sections of the University Dining Halls.

PART VII

GENERAL REGULATIONS, RELIGIOUS WORSHIP AND ACTIVITIES, AND PUBLIC LECTURES

GENERAL REGULATIONS

TERMS AND VACATIONS

The Annual Commencement takes place on the Tuesday preceding the last Wednesday but one in June. The University opens on the Tuesday thirty-eight weeks preceding the date of the Annual Commencement.

The academic year is divided into two terms of eighteen weeks each. The first term of the next academic year (1917-1918) will begin on Tuesday, the 25th of September, 1917, and end on Tuesday, the 12th of February, 1918. The second term will begin on Wednesday, the 13th of February, 1918, and end on Tuesday, the 18th of June, 1918, the day of the Annual Commencement.

The Christmas vacation in 1917-1918 will extend from December 20, 1.30 p. m., to January 4, 10.30 a. m.; and the Easter Recess from March 27, 1.30 p. m., to April 2, 10.30 a. m. Class exercises are not held on Thanksgiving Day and Washington's Birthday.

The Baccalaureate address to the graduating class is delivered on Sunday of Commencement week.

The Class Day exercises of the graduating class and the annual meetings of the Literary Societies are held on Monday of Commencement week. The alumni trustee election and the annual alumni luncheon are held on Commencement Day.

REGULATIONS CONCERNING REGISTRATION AND THE CHOICE OF ELECTIVES

RULES FOR REGISTRATION

At the beginning of the academic year each undergraduate student shall report in person at the Registrar's Office before

3 p. m. on the Tuesday on which the University opens, and register his full name, home address, and Princeton address.

In every case of neglect or delay in registration three absences will be recorded against the student for each day that the registration is delayed. Serious cases will be punished by putting the student on probation, by suspension, or otherwise, as the Faculty may determine.

CHOICE OF ELECTIVES

It is very desirable to obtain from each student his choice of electives as early as possible, so that the rolls of the elective classes may be made out before the opening of the term. The students are therefore requested to report to the Registrar their choice of electives for the first term of the next academic year [1918-1919] on or before the 22nd of May. Changes which the student desires to make in his choice may be made by letter to the Registrar in the summer vacation. No changes will be allowed after the beginning of the academic year.

The choice of electives for the second term of the current academic year must be reported to the Registrar on or before the 29th of January. No changes will be allowed after the 12th of February.

The penalty for delay in reporting the full list of electives for the term shall be the record of one absence each day for each elective not reported until the list is complete; this delay to be reckoned from the registration at the beginning of the academic year or from the 29th of January. Serious cases shall be punished more severely as the Faculty may determine. If the student enter any elective class after exercises with that class have been held, he shall be reported by the instructor as absent from those exercises.

REGULATIONS CONCERNING ATTENDANCE

1. The Dean of the College has charge of all matters pertaining to attendance on chapel and class exercises. Office hours from 2 to 3 p. m. daily except Saturday, in Nassau Hall.

2. Every undergraduate student in residence at the University is required to attend at least one-half of the Sunday Chapel services each quarter, unless excused by the President or the Dean of the College. Failure to comply with this rule will render him liable to suspension.

3. In case of persistent neglect to attend Sunday Chapel services the Dean of the College has authority to compel attendance at specified times and under specified conditions, under penalty of suspension.

4. Juniors who in their sophomore year maintain a general standing of first or second group, seniors who in their junior year maintain a general standing of first or second group, and junior and seniors who are regularly admitted to candidacy for final special honors, are excused from compulsory attendance upon class exercises as long as they maintain a general standing of first or second group, or remain eligible for final special honors.

5. Every other undergraduate student is required to attend the scheduled exercises of his class. A student who for any cause incurs 40 absences in any term or in any two successive terms, must take an extra course of three hours a week in the next term. All absences above 40 will be counted toward an additional extra course. In case of an unavoidable absence for a prolonged period, the application of this rule may be modified by the Faculty upon recommendation of the Dean of the College.

6. If any senior becomes liable for an extra course through absences incurred in the second term, the awarding of his degree shall be deferred until after Commencement.

Exemption from the application of this rule may be granted by the Faculty upon the recommendation of the Dean of the College.

7. Any undergraduate student, except those excused from compulsory attendance in accordance with paragraph 4, who absents himself from any class exercise either immediately before or immediately after any vacation during the academic year shall be placed upon probation if, in the opinion of the Dean of the College, his absence has not been caused by necessity. A student so placed upon probation shall be deprived of the privilege of engaging in any extra curriculum activity requiring absence from any class exercise during his period of probation, and any student thus placed upon probation who absents himself unnecessarily from any class exercise during his period of probation shall be liable to suspension or dismissal. Every absence incurred before or after vacations shall be counted as a single absence and shall be charged against the gratuity.

8. Flagrant cases of absence will necessitate immediate withdrawal from the University.

MODE OF CONDUCTING EXAMINATIONS

All written examinations and written recitations are conducted under the honor system. A student is not watched during an examination by an officer of the University, but he is required to write on his paper a pledge that he has not been guilty of any dishonesty or irregularity in connection with the examination.

The administration of the honor system is in the hands of a student committee by whose rules it is the recognized duty of every student to report to the committee any evidence of dishonesty in examination that may come under his observation. If after investigation of such evidence the committee finds a student guilty of dishonesty, it reports

his case to the Faculty with a recommendation that he be finally dismissed from the University.

REGULATIONS RESPECTING CONDITIONS AND ABSENCE FROM EXAMINATIONS

I. *Conditions*

At the end of each term reports are made to the Registrar of the standing of every student in the courses which he has taken. If the student's work in a course is above the passing grade he is reported in one of the five groups described on p. 347. If this work is not above the passing grade he is reported as conditioned in the course.

A student is conditioned in a course:

(1) If he fails to satisfy the requirements of the course. In determining his failure the work of the term as well as the examination is taken into account.

(2) If he is excluded from the examination by a Department on recommendation of a preceptor, because his work done in the term with the preceptor has been unsatisfactory.

(3) If he is excluded from the examination by a Department on recommendation of a laboratory instructor, because his work done in the term with the laboratory instructor has been unsatisfactory.

(4) If he is absent from the examination, for any cause, provided his term grade in the course is below the passing grade.

(5) If he is absent from the examination, for any cause, except illness or some equally compelling reason, even if his term grade in the course is above the passing grade. In cases of justifiable absence the examination may be postponed, provided his term grade in the course is above the passing grade, if the necessary absence occurs (1) at the time of the examination; (2) or immediately preceding it; (3) or has extended over a considerable portion of the term.

Whenever practicable, permission to postpone an examination must be obtained in advance from the Dean of the Faculty or the Registrar. Such a postponed examination must be taken at the time set for the removal of conditions by examination. The results of this examination are to be combined with the record of the term's work to determine whether or not the student has satisfied the requirements of the course. If the requirements of the course are not satisfied, the student is conditioned in the course as if he had taken the regular examination.

Note.—In case of absence covering more than half a term, the term will not be counted toward fulfilling the requirements for graduation. In case of protracted absence covering less than half a term the student's schedule for the term will generally be reduced, and he will not be allowed to take examinations in all his courses.

II. *Removal of Conditions*

A. Conditions are of two classes:

(1) Class F (Failure in the course), in which the failure is such that the condition may be removed by examination.

(2) Class R (Repeating of the course), in which the failure is so serious that the condition may not be removed by examination. Such a condition will be imposed when a student whose work during the term has been below the passing grade fails in the final examination, but no student whose work during the term has been above the passing grade shall be given a Class R condition because of failure in the final examination.

Note.—A condition incurred by exclusion from the examination is of the R Class. A condition incurred by absence from the examination is of the F Class, if the term grade is above the passing grade. If the term grade is be-

low the passing grade, the instructor in charge of the course shall report whether the condition is of the F Class or of the R Class.

B (1) Examinations for the removal of conditions of the F Class will be held for all students in September in the two weeks beginning on the third Monday before the opening of the academic year. Conditions which are not removed at this time are transferred to the R Class.

Examinations for the removal of conditions of the F Class incurred by seniors in either term of senior year will be held in the senior vacation.

(2) A condition of the R Class may be removed only by taking again and satisfactorily completing the course in which the condition was incurred or by taking and satisfactorily completing a course which is a lawful substitute for the one in which the condition was incurred. If a substitute is desired, permission to take it must be obtained from the Registrar before the opening of the term.

a. There is no lawful substitute for a required course. The course in which the failure occurred must be taken again.

b. Any one course in a group of which one or more courses must be chosen is a lawful substitute for any other course of that group.

c. Any free elective is a lawful substitute for a free elective.

C. A student who, after the close of the September examinations, has any conditions remaining against him or is obliged to take an extra course because of absences or an entrance condition, shall at once proceed to remove the conditions or meet the obligation of the extra course by taking the requisite number of courses. His schedule of courses must be approved at the opening of the year by the Registrar. The courses taken for this purpose will displace

an equal number of advanced courses, so that his schedule shall contain the same number of courses as that in the regular schedule of his class.

III. *Failure Resulting in Loss of Membership in the University*

(1) A student who has conditions at the end of a term covering half the work of that term, is dropped from the University.

(2) A student of any of the three upper classes who in the two terms of an academic year has incurred conditions of the R Class covering nine hours or more, or who, by failure to remove conditions of the F Class in September has at that time conditions of the R Class amounting to nine hours or more, is dropped from the University.

(3) A member of the freshman class who in the two terms of an academic year has incurred conditions of the R Class amounting to twelve hours or more, or who, by failure to remove conditions of the F Class in September, has at that time conditions of the R Class amounting to twelve hours or more, is dropped from the University.

(4) A student whose deficiencies, resulting from the displacement of regular courses by courses which have been taken to remove conditions of the R Class, or by courses taken because of absences or an entrance condition, amount to five or more courses, is dropped from the University.

IV. *Terms of Readmission*

A student who has been dropped from the University for failure in his studies and who wishes to re-enter must make application to do so through the Registrar. If his application is granted, and he re-enters the University, he will be on trial for one term, this term to be terminable at any time by the Faculty if his record is unsatisfactory.

(1) A student of the Department of Civil Engineering dropped at the end of the first term is required to leave Princeton for at least a term. After a term's absence, if his application for readmission is granted, he may be admitted to the next lower class at the beginning of the academic year.

(2) A student of any other department dropped at the end of the first term is required to leave Princeton for at least a term. After a term's absence, if his application for readmission is granted, he may be admitted:

(*a*) to the next lower class at the beginning of the academic year.

(*b*) or as a qualifying student, with an arrangement of studies which will make it possible for him to meet the requirements for graduation at some time after the graduation of his class.

(3) A student of the Department of Civil Engineering dropped at the end of the second term, may apply for admission to the next lower class. If his application is granted he may enter the next lower class at the beginning of the next academic year, or, with the permission of the Committee on Examinations and Standing, he may leave Princeton for a term, and enter the next lower class at the beginning of the second term of the next academic year.

(4) (*a*) A student of any other Department dropped at the end of the second term may apply for admission to the next lower class. If his application is granted he may enter the next lower class at the beginning of the next academic year.

(*b*) If he wishes to continue his studies as a qualifying student, he is required to leave Princeton for at least a term. After a term's absence, if his application for readmission is granted, he may be admitted as a qualifying student, with an arrangement of studies which will make it possible for

him to meet the requirements for graduation at some time after the graduation of his class.

V. *General Regulations Concerning Conditioned and Readmitted Students*

(1) A student who is under conditions is not allowed to take in any term a larger number of courses than that constituting the regular work of the term. Courses taken to remove conditions of the R Class or because of absences or an entrance condition become a part of the regular schedule, and displace more advanced courses which might otherwise be taken. An equivalent number of courses to those thus displaced must be taken in some later term.

(2) A student who at the beginning of a term is not under conditions, but who has been obliged in previous terms, for whatever reasons, to omit one or more courses, so that he is not in full standing with his class, may apply to the Registrar for permission to take a larger number of courses than that constituting the regular work of the term. If the application is granted, he may take one extra course, and not more than one, in each succeeding term, unless in any term he receives a condition. In case he receives a condition, the privilege of taking an extra course is revoked.

(3) A senior whose average standing in the preceding term is in a group higher than the fifth, may apply for permission to take an extra course, even though he has conditions.

(4) No student who requires fewer than five courses for graduation shall be permitted to take fewer than four courses in his last term. He shall be held responsible for the completion of all the courses which he takes in that term.

(5) A student whose deficiencies, resulting from the displacement of regular courses by those which have been taken

to remove conditions of the R Class, or by those taken for absences or an extra condition, amount to three or more courses, shall be ranked as a candidate for graduation one term later than the class of which he was a member.

VI. *Removal of Entrance Conditions*

(1) Opportunities for the removal of entrance conditions by examination are given only at the regular entrance examinations in June and September.

(2) No student under entrance conditions will be admitted to the sophomore class, except by express permission of the Committee on Examination and Standing. If this permission is granted, the student will be required to take for the removal of the entrance condition a course in the subject in which his condition lies. The course so taken will displace one of the student's regular courses See II C and V (1).

VII. *Fees*

A fee of $3 is charged for each examination taken for the removal of a condition; also for the examination in a course which has been repeated or which has been taken for the removal of a condition.

VIII. *Administration of the Rules*

The administration of the rules concerning conditions, and all other rules which concern the standing of a student in his class, or the standards of scholarship in general, is in charge of the Committee on Examinations and Standing. The Dean of the Faculty is Chairman of this Committee, and the Registrar is Secretary. Matters to be brought before the Committee should ordinarily be presented to the Registrar in writing, or may be presented in person at a meeting of the Committee.

The Committee on Examinations and Standing applied the above rules with reference to all work from the beginning of the first term of the academic year 1916-1917.

Beginning with the academic year 1917-1918 conditions incurred before the academic year 1916-1917 will be treated exactly in the same manner as conditions incurred during the academic year 1916-1917.

FRESHMAN TESTS

(1) At three set times in each term general uniform tests will be held in all the subjects of freshman year, and upon a combination of the marks obtained in these tests and in the recitations, a report of the standing of each student shall be handed in to the Registrar's office within five days from the date of the test.

(2) The deficiencies reported shall be investigated in personal interviews with the students for the purpose of finding out the nature and cause of such deficiencies.

(3) A student who is deficient in eight or more hours shall be put on probation and shall be debarred from participation in all extra-curriculum activities.

(4) A student who flagrantly and persistently neglects his work shall be compelled to withdraw from the University, and shall be subject to the rules governing students dropped at the end of the term.

STANDING

The results of the term examinations are combined with those of the work done during the term to decide the relative standing or rank of the student.

The rank in each course is determined by the instructor, who computes from the term work and examinations the marks of the class; those who have satisfied the require-

ments of the course are classified in five groups in the order of merit.

The first group indicates very high standing and contains not more than ten per cent of the entire class.

The second group indicates high standing and contains not more than twenty per cent of the entire class.

The third group indicates medium standing and contains not more than thirty-five per cent of the entire class.

The fourth group indicates low standing and contains not more than twenty-five per cent of the entire class.

The fifth group contains the remainder; it indicates very low standing.

The general rank of a student is determined by combining his group numbers in the several courses in proportion to the allotted schedule time of each. The students whose averages are highest and above an established limit are assigned to the first general group; those next highest to the second general group, and so on through the general groups.

A report of the standing of each student is made to his parent or guardian by the Registrar at the close of the first term and at the close of the year. The latter report gives also the standing for the whole year.

DEGREES

A student who passes his final examinations is ordinarily recommended by the Faculty for the degree appropriate to his course, and if the recommendation is approved by the Trustees, the degree is conferred at Commencement and the diploma of the University is given.

FINAL RANK

The final rank of members of the graduating class is computed by combining the averages for the several years

of the course, except that the average for the freshman year is omitted in those cases in which it would lower the standing of the student. Special Honors in particular departments are awarded.

COMMENCEMENT SPEAKERS

The student whose individual rank is highest is ordinarily awarded the Latin Salutatory by vote of the Faculty. The Valedictory is awarded with special regard to the qualifications of the student as a valedictorian as well as on the ground of scholarship.

In the award of all degrees and honors, regard is had to the conduct of the student during his course, and any student who has incurred serious discipline may be debarred from the rank to which otherwise his scholarship would have entitled him.

INFIRMARY REGULATIONS

1. The Sanitary Committee shall have general control of the medical administration of the Infirmary, the care of patients, and the relations of physicians or nurses to the Infirmary or to each other, subject to the approval of the Board of Trustees.

2. The University Physician or the Assistant Physician will be in attendance at the Infirmary every day from 8.30 to 10.30 a. m., and from 5.00 to 6.00 p. m. There will be no charge for students for consultation and treatment at the Infirmary.

3. Any physician legally registered or licensed to practise medicine in the State of New Jersey will be privileged to attend patients in the Infirmary upon the approval of the Sanitary Committee. Physicians who desire to attend patients at the Infirmary will make application to the Secretary of the Sanitary Committee. This rule does not apply to

physicians or surgeons called in consultation by an attending physician.

4. Assignments of patients to individual rooms at the Infirmary will be made at the discretion of the University Physician.

5. Should the number of patients at the Infirmary at any time become so large as to require the removal elsewhere of convalescents to make room for cases of serious illness, it shall be the duty of the University Physician to determine which patients may, with safety, be removed in the emergency.

6. Only emergency cases will be operated on at the Infirmary.

7. Every patient will be required to leave the Infirmary promptly after being dismissed by his physician.

8. If special nurses are required, they will be procured at the direction of the University Physician and controlled by the Infirmarian and an extra charge made to the patient.

9. Visitors and patients will be admitted between the hours of 1.30 and 5.30 p. m. Visitors are not admitted to the contagious ward.

RELIGIOUS WORSHIP AND ACTIVITIES

The President of the University, the Trustees, the Faculty, and national church leaders of different denominations are united with the undergraduates of Princeton in supplying to the University a comprehensive religious program. The present tendency in Princeton University is to use the Philadelphian Society, the University Y. M. C. A., as the executive medium through which religious instruction, worship, and activities shall be expressed. The President of the University is the responsible center of these interests, having direct charge of the University services in Marquand Chapel, while the executive details are cared for through the Board of Directors and officers of the Philadelphian Society in Murray-Dodge Hall.

This Society as founded in 1825. The group of students who established the Student Department of the Y. M. C. A., out of which has sprung the World's Student Christian Federation, went out from Princeton in 1877, as representatives of the Philadelphian Society, and the Student Volunteer Movement for Foreign Missions also was started by members of the Society who attended the first student conference at Northfield in 1888.

Murray Hall, erected in 1879 from a bequest left for the purposes of the Society by Hamilton Murray, of the Class of 1872, contains an auditorium and a room for general social and business purposes. Dodge Hall, connected with Murray Hall by an ambulatory, is the gift of the late William E. Dodge, and his son, Cleveland H. Dodge, Esq., of the Class of 1879, in memory of the late W. Earl Dodge of the same Class. It contains a reception room and office, on the first floor, four rooms for the classes which have

been equipped as centers for Social Service, Missions, Bible Study, and Worship; a visitor's room and bed-room for the Resident Minister, a suite of rooms for the Associate Secretary; dormitory rooms for visiting speakers and a room for the student superintendent. The privileges of the building are extended to all students of the University, irrespective of their relations to the Philadelphian Society.

I. Religious Courses and Lectures

The President of the University and the Curriculum Committee of the Board of Trustees are cooperating with the Board of Directors of the Philadelphian Society in presenting to the undergraduates of the University a complete series of courses covering the different approaches to the field of religion. Professors and instructors from the various departments of the University are arranging to offer voluntary courses in the History of Religions, the Philosophy of Religion, the Literary Study of the Bible, the Scientific Approach to Christianity, the Old Testament, the New Testament, Foreign Missions, Social Service, and the general problems of morality and character.

As announced in another section of the catalogue under the head of University Lectureships, a special series of open lectures on the Fundamentals of Christianity has been established. The lecturers in the past two years have been ex-President Francis L. Patton, D.D., LL.D., and President Robert A. Falconer, D.D., LL.D. The lecturer for the current year is the Reverend Professor John Douglas Adam, D.D., LL.D.

II. Religious Worship

Divine Service is held in Marquand Chapel each Sunday morning at 11 o'clock. Attendance upon this service is required of all undergraduates for one Sunday in two through-

out the College year. Evening service is held either in Marquand Chapel or in union with the town churches Sundays at 7:30 P.M. A service is held each week-day morning from 10:15 to 10:30 o'clock in Marquand Chapel, upon which attendance is voluntary.

The sacrament of Holy Communion is celebrated by the President of the University in Marquand Chapel twice during each college year—in the fall and during the spring term.

Any student may register for Sunday attendance in one of the town churches and his presence there will be credited in place of attendance at the University Service in the Chapel.

University Resident Ministers

The religious welfare of the University is further enhanced by the presence of distinguished Christian leaders who visit Princeton for at least a week of active service, conducting the Chapel exercises and stimulating the undergraduates and the Philadelphian Society in all of its activities. During his visit the Resident Minister lives in Murray-Dodge Hall, takes his meals at the Clubs, at the University Dining Halls, or at the Graduate College, and mingles freely with the students and members of the Faculty and in group discussions. In a number of cases he also delivers a series of public lectures along the lines of his special investigations or experience.

III. Religious Activities

The phase of religion which probably appeals most strongly to the largest number of students is that of direct service. Hundreds of students each year engage in such service on behalf of the boys in the town of Princeton, go out for week-ends in deputations to the villages and cities of New Jersey, visit the preparatory schools, teach Sunday

School classes, or gain some knowledge of the problems of social work through visits to settlements and missions in New York and Philadelphia. During the present war, a very large proportion of student service activities are centering in work at Camp Dix, Wrightstown, N. J., and among groups of soldiers about Trenton. Speakers, singers, and entertainers are constantly going out from the University to help the Y. M. C. A. in its work among the soldiers. The undergraduates are also rendering very service possible to the Princeton men who have enlisted in the Army and Navy.

Princeton Summer Camp

On the Metedeconk River, mid-way between Lakewood and Bay Head, the Philadelphian Society owns a tract of twelve acres in the Jersey Pines which has been equipped with a large bungalow, shacks, and boats, for camping purposes. Here, during the summer months, with undergraduates as counselors, city street boys camp for several weeks, under the direction of University students.

Princeton Center in Peking, China

In many respects, one of the largest efforts at service which Princeton University is carrying on is that of the Peking Y. M. C. A., which serves as a great religious and social center for the officials, students and merchants of the capital of China. This work is conducted by Robert R. Gailey '96, Director, Dwight W. Edwards '04, J. Stewart Burgess '05, Amos N. Hoagland '06, Donald W. Carruthers '15, Samuel M. Shoemaker Jr. '16, Richard H. Ritter '17, and D. B. Tyler '18.

IV. Princeton and the Church

All phases of religious life and work at Princeton are in sympathetic relationship with the Christian Church in general. The Resident Ministers are prominent Church leaders; the religious instruction and activities train the students for

service throughout the world; and both the Episcopal and the Presbyterian Churches are supplying within the University, on the staff of the Philadelphian Society, special representatives who work particularly among the students of their own denominations from the interdenominational point of view of University life.

The undergraduate organization of the Philadelphian Society provides for Episcopal, Presbyterian, Methodist, and other churches Committees the chairmen of which are regular members of the undergraduate Cabinet of the Society. Under the direction of these Committees special Church receptions, corporate communion services, confirmation classes, and evangelistic work are carried on among the undergraduates.

V. Directors and Officers

The executive and administrative religious work of the University centers in the following Board of Directors and staff of secretaries:

Board of Directors

John Grier Hibben '82, *Ex-Officio*
John McDowell '94, *Chairman*
J. Ross Stevenson, Princeton Theological Seminary
Robert P. Wilder '86
Paul Matthews '87
Robert E. Speer '89
T. H. P. Sailer '89
Robert Garrett '97
Ralph W. Harbison '98
Charles E. Beury '03
Norman M. Thomas '05
Norman B. Tooker '06
Timothy N. Pfeiffer '08
Cleveland E. Dodge '09
George W. Perkins, Jr., '17
Charles W. McAlpin '88, *Treasurer*

Officers

General Secretary
Thomas St. Clair Evans '97

Church Secretaries
The Rev. Ralph B. Pomeroy (Episcopal)
The Rev. O. F. Gardner '01 (Presbyterian)

PUBLIC LECTURES

TRASK LECTURES

The income from $10,000, presented by the late Spencer Trask, of the Class of 1866, is available to secure the services of eminent men to deliver public lectures before the University on subjects of special interest.

STAFFORD LITTLE LECTURESHIP ON PUBLIC AFFAIRS

Founded in 1899 with a gift of $10,000 by the late Henry Stafford Little, of the Class of 1844. At the suggestion of the donor, the Hon. Grover Cleveland, ex-President of the United States, was invited to deliver before the students of the University "such lectures as he might be disposed to give from year to year," and until his death in 1908 Mr. Cleveland was the Stafford Little Lecturer. Since that time it has been customary to have a different lecturer each year.

The Stafford Little Lecturer for the year 1917-1918 is the Hon. Theodore Roosevelt, ex-President of the United States.

The Stafford Little Lectures are published by the Princeton University Press.

THE LOUIS CLARK VANUXEM FOUNDATION OF PRINCETON UNIVERSITY

A bequest of $25,000 under the will of Louis Clark Vanuxem, of the class of 1879. By direction of the executors, the income of this foundation is to be used for a series of from four to six public lectures before the University annually, at least one half of which shall be on subjects of

current scientific interest. The lectures are to be printed and distributed among schools and libraries generally. They are published annually by the Princeton University Press.

The lecturer for the year 1917-1918 is Paul Elmer More, LL.D.

UNIVERSITY LECTURES ON CHRISTIANITY

In June, 1914, the Board of Trustees established an annual course of university lectures on the Nature of Christianity or on the History and Literature of the Bible, to be given each year by a scholar of recognized ability and learning.

The lecturer for 1917-1918 is the Rev. John Douglas Adam, D.D., Professor of Practical Theology, Hartford Theological Seminary. The subject of the course will be "Some Christian Fundamentals," and the lectures will be four in number.

THE ALBERT PLAUT CHEMICAL CLUB FUND

Established in 1912 with a gift of $5,000 by Mr. Albert Plaut, of New York. The income is to be used for the benefit of the Chemical Club, and primarily for providing lectures before the club by men of distinction in the field of industrial chemistry or a related science.

PART VIII

GROUNDS AND BUILDINGS, AND INSTITUTIONS CONNECTED WITH THE UNIVERSITY

GROUNDS AND BUILDINGS

THE CAMPUS

During the first decade of its existence, the College of New Jersey owned neither grounds nor buildings. The college exercises were held either in the house of the President or in convenient rooms elsewhere.

From the beginning, however, it had been the purpose of the Trustees to erect college edifices in a central part of the State and there locate the institution permanently. It was voted, May 15, 1751, therefore, that the necessary buildings should be erected at New Brunswick, provided the citizens of that place secured to the College the sum of one thousand pounds proclamation money, two hundred acres of woodland, and ten acres of cleared land. An offer of these terms was also made by the inhabitants of Princeton at the same meeting of the Trustees; and when, in September, 1752, it was learned that New Brunswick had not complied with the required terms, the Princeton offer was formally accepted. The particular tract of ground which became the site of Nassau Hall was given by Nathaniel Fitz-Randolph and the money guarantee was furnished by Messrs. John Stockton, Thomas Leonard, and John Horner, all wealthy residents of the village.

The University campus consists roughly of four tracts of land adjoining each other. The central portion, of about two hundred and four acres, forms a quadrangle bounded by Nassau Street on the north, Washington Road on the east, Lake Carnegie on the south, and the line of the Pennsylvania Railroad on the west.

The western portion, known as Springdale Farm, which was presented to the University in 1905, consists of two

hundred and thirty-one acres, lying between the Theological Seminary and Stony Brook.

The third portion, known as the Olden Farm, lying on the eastern side of Washington Road, was also presented to the University in 1905. It consists of ninety-three acres and includes Laughlin Field and the woodland lying between the line of the clubs on Prospect Avenue and the lake.

The fourth portion, which bears the name of the Butler Tract, was presented to the University in 1912. It lies next to a piece of land owned by the Lake Carnegie Association adjoining the Olden Farm, and contains upwards of ninety-three acres. The Butler Tract, together with the land of the Lake Carnegie Association, forms a continuous property of about four hundred and thirty acres, with a frontage of over a mile and a half on Lake Carnegie. The trustees of the Lake Carnegie Association are required to be either alumni, Trustees, or members of the Faculty of Princeton University, and their property is held in the interest of the University.

All the University buildings are heated by steam and lighted by electricity, and in addition, with the exception of those in Reunion Hall, almost all studies are provided with open fireplaces. Every entry in each of the dormitories is provided with a lavatory, containing shower baths and other toilet facilities.

NASSAU HALL

Nassau Hall, the oldest and historically the most interesting building on college property, is situated on the most elevated point of the front campus. At the time of its completion in the autumn of 1756, it was the largest academic building in the country. It was designed by Robert Smith, of Philadelphia, and was built of sandstone quarried in the neighborhood. In its three stories and basement it formerly contained, exclusive of the prayer hall or chapel,

which occupied the central portion of the building, sixty rooms, including the refectory, library, and recitation rooms. It was named Nassau Hall in honor of William of Nassau, Prince of Orange, William III of England. During the Revolution it served at different times as hospital and barracks for American and British troops; here from June to November, 1783, the Continental Congress sat, and here, on the twenty-sixth of August, Washington received the thanks of Congress for his conduct of the war of the Revolution.

Changes in the interior, consequent upon two disastrous fires in the last century, strikingly altered the arrangement of the building. The large central hall on the main floor has been remodeled and is now the Faculty Room of the University. At the present time the east wing contains the offices of the President, the Secretary, the Dean of the College, and the Registrar. The west wing contains the offices of the Dean of the Graduate School, the Graduate Council, the Undergraduate Schools Committee, and several private offices. On the third floor of the west wing are the laboratories of experimental psychology.

THE DEAN'S HOUSE

A house for the President of the College was erected in 1756, and continued to be the presidential residence until 1878, when Prospect was acquired. Since the creation of the office of Dean of the Faculty the house has been the official residence of the Dean.

STANHOPE HALL

In 1803 a stone building containing recitation rooms, a library, and an apartment for the two literary societies of the College, the Cliosophic and the American Whig, was erected west of Nassau Hall. This building now contains

the offices of the Treasurer, and the several offices of business administration. It is named after President S. Stanhope Smith, Class of 1769.

PROSPECT

Prospect, the official residence of the President of Princeton University, is one of the oldest estates in the town, although it was not acquired by the University until 1878. The mansion, erected in 1849, is situated in extensive grounds, the main entrance to which opens on McCosh Walk.

DICKINSON HALL

This building, the gift of John C. Green, Esq., is used for a recitation and lecture hall. It was erected in 1870 from the designs of George B. Post, of New York, and is built of local stone trimmed with Connecticut limestone. It was named by Mr. Green as a memorial of Jonathan Dickinson, the first President of the College. In 1876 extensive alterations were made in the building and the exterior was much changed.

THE SCHOOL OF SCIENCE BUILDING

The School of Science Building was erected in 1873 and liberally equipped by John C. Green, Esq. It is devoted to the purposes of instruction in the Department of Civil Engineering.

On the first and second floors are located the civil engineering lecture and drawing rooms and the departmental library. In the graphics room is a set of duplicates of the more important Olivier models of ruled surfaces; here also are the Björling developable surface models, a number of the Muret set, and the Shröder mathematical models.

In the basement of the building are other recitation rooms

and the machine shops of the School of Science, and connected with it is the dynamo building of the School of Electrical Engineering.

MARQUAND CHAPEL

CHARLES EGBERT BURNHAM, *Choirmaster*

The chapel was the gift of the late Henry G. Marquand, Esq., of New York. The cornerstone was laid in June, 1881. The building is constructed of brownstone, and is cruciform in shape. The apse contains the organ and choir stalls. The gallery over the main entrance is used in part for visitors. The faculty stalls are along the sides of the building. The mural and window decorations are noteworthy. The St. Gauden's heroic bronze high relief of the late President McCosh, erected by the Class of 1879, faces the visitor on entering; by its side are the low relief memorial tablet to Professor Joseph Henry and the bronze tablet to Professor Arnold Guyot, set in a fragment of a Swiss glacial boulder presented by the authorities of his native city, Neuchatel. On the east wall of the south transept is the memorial tablet to the Rev. James Ormsbee Murray, first Dean of Princeton University, presented to the University in November, 1901. This tablet is of rose-colored Numidian marble, upon which is a medallion portrait in bas-relief of white marble, surrounded by an embossed wreath. On the north wall are three bronze memorial tablets; one in memory of the Faculty of the early sixties, erected by the Class of 1863; one in memory of George Yardley Taylor of the Class of 1882 and Cortlandt van Renssalaer Hodge of the Class of 1893, medical missionaries who were killed at Paoting Fu, China, in 1900; and one erected by the Class of 1903 in memory of Daniel Miner Rogers of that class, who was killed at Adana, Turkey, in 1909.

The south and north windows, by Lathrop, are in memory of Frederick A. Marquand, of the Class of 1876, and William Earl Dodge, of the Class of 1879. The west window, by Tiffany, is the gift of Mrs. T. Harrison Garrett, of Baltimore, in memory of her son, Horatio W. Garrett, of the Class of 1895. The Sunday and daily morning services are held in the chapel.

ALEXANDER HALL

This building, the gift of Mrs. Charles B. Alexander, is used for Commencement and Class Day exercises, public lectures, and other university gatherings of a general character. The auditorium is arranged with sloping floor and high gallery so that an audience of fifteen hundred may be comparatively near the speaker. The rostrum and President's chair are finished in colored marble and polychromatic mosaic. Behind the rostrum is a series of mosaic wall pictures, designed by J. A. Holzer, illustrative of the Homeric story. A large organ built by George Jardine and Son stands in one of the galleries near the rostrum.

The building is constructed of granite and brownstone, and is Romanesque in style. The front toward the south contains a large rose window beneath a gable roof, and between the central structure and two side towers are two round-arched openings which lead into a wide ambulatory encircling the building. From this ambulatory the rostrum and auditorium are reached. The two side towers and two smaller ones at the rear enclose staircases, which lead to the auditorium gallery. The building, which was designed by William A. Potter, has been decorated with sculpture, under the direction of the architect, by J. Massey Rhind. Beneath the rose window on the south front is a seated figure of Learning, on one side of which are allegorical figures of Architecture, Sculpture, Painting, Poetry,

Music, and Belles Lettres; on the other, of Oratory, Theology, Law, History, Philosophy, and Ethics. There are other sculptures about the rose window and in the niches around the ambulatory.

ISABELLA MC COSH INFIRMARY

JOHN MCDOWELL CARNOCHAN, M.D., *University Physician*
JOSEPH S. VANNEMAN, M.D., *Assistant University Physician*
HELEN GROSS, R.N., *Infirmarian*

The healthfulness of the town of Princeton is exceptional, a recent report of the State Board of Health showing that among towns in New Jersey having a population of 5,000 or more the mortality at Princeton is easily the lowest. Nevertheless, the illness incident to a university community, slight though it ordinarily is, demands special accommodations. The Isabella McCosh Infirmary, erected in 1892 by alumni and friends of the University, and subsequently enlarged, is the university hospital. It is equipped with the most modern conveniences and necessaries of hospital construction, and comprises two separate buildings connected by a corridor. One of these is reserved as a ward for contagious diseases and for other cases requiring special isolation.

As the infirmary is not fully endowed, each student is charged an annual fee of $7 ($3.50 per term) which in all cases of ordinary illness procures for him the necessary care, including board, nursing, laundry, and physician's fees. When an illness extends beyond a week, board is charged after the first week at the rate which the student pays at his usual boarding place. While he is at the infirmary his board is rebated at his boarding place. Ordinary consultations are given daily by the University Physician or the Assistant University Physician at the office in the infirmary, free of charge. The infirmary is under the constant and

careful supervision of the University Sanitary Committee. The Infirmarian, who is an experienced trained nurse, and seven assistant nurses are in residence, and a housekeeper and regular servant staff are maintained. When special nursing is required an additional charge is made.

Proprietors of lodging houses where students live in town are required to report to the Secretary of Business Administration any cases of illness which occur in their houses. The University Physician is immediately notified and if in his judgment the student should be removed to the infirmary he orders the student to be removed, and so reports to the infirmary. The Infirmarian reports to the office of the Secretary of Business Administration when a student is admitted to or discharged from the infirmary. Similarly, if a student is found ill in a dormitory room his janitor reports the fact to the office of the Superintendent of Grounds and Buildings who in turn notifies the University Physician.*

THE FITZ RANDOLPH GATE-WAY

The Fitz Randolph gate-way, the gift of the late Augustus VanWickle, was erected in 1905 as a memorial of his ancestor Nathaniel Fitz Randolph, the donor of the ground on which Nassau Hall stands.

This gate-way, designed by Messrs. McKim, Mead and White, forms the main entrance to the campus from Nassau Street and leads directly to the steps of Nassau Hall. Facing Witherspoon Street there are four large limestone gate-posts decorated in front and back with the arms of the University and surmounted by two eagles carved from the stone. The fence accompanying the gate-way extends along Nassau Street from the Dean's House to the Library entrance.

* For Infirmary Regulations see p. 348.

MC COSH HALL

This collegiate Gothic building of Indiana limestone, erected in 1907 by friends in memory of the late President McCosh, composes one side of a contemplated quadrangle. It was designed by Raleigh C. Gildersleeve.

It is over 400 feet long and contains 18 lecture rooms and 26 rooms for preceptorial conferences. It contains one room seating 600 persons, one room seating 400, four rooms seating 75, four rooms seating 65, and six seating 50 each. The University Stock Room is located in the basement.

The building is fireproof and is heated, ventilated, and lighted by the latest methods.

SUN DIAL

The sun dial, in the center of the court just north of McCosh Hall, was erected in 1907, the gift of the Right Honorable Sir William Mather, of London. It is an exact replica of the Turnbull sun dial at Corpus Christi College, Oxford.

DORMITORIES

WEST COLLEGE

West College, built in 1836, is the oldest dormitory building still standing. It forms the western side of the central quadrangle and contains accommodations for sixty-four students.

REUNION HALL

Reunion Hall, erected in 1870 on the site of Professor Joseph Henry's residence, was so named to commemorate the reunion of the Old and New Schools of the Presbyterian Church. Prominent members of each party gave the funds by which it was built, and its cornerstone was laid by the officers of the General Assembly. It contains accommodations for sixty-five students.

WITHERSPOON HALL

Witherspoon Hall, named after Princeton's President of Revolutionary days, the signer of the Declaration of Independence, was built in 1877. It contains accommodations for eighty students. Built of gray stone with brownstone trimmings in the Victorian Gothic style, it towers above the neighboring buildings on the western section of the campus and forms the north side of the quadrangle enclosed by Edwards and Stafford Little Halls.

EDWARDS HALL

Edwards Hall, a brownstone Gothic building, is named after President Jonathan Edwards and contains accommodations for eighty-two students. It was erected in 1880.

ALBERT B. DOD HALL

Albert B. Dod Hall, the gift of the late Mrs. David Brown, of Princeton, was erected in 1890 in memory of her brother, Professor Albert Baldwin Dod, of the Class of 1822. It was designed by John Lyman Faxon. It is a massive structure in the Italian style, of granite with limestone trimmings, with columns of Georgia marble flanking the entrance. The carving over the main entrance is Byzantine. The building has accommodations for seventy-seven students.

DAVID BROWN HALL

David Brown Hall, another gift from Mrs. Brown, was erected in 1891 in memory of her husband. This building was also designed by John Lyman Faxon. It is modeled after a Florentine Renaissance palace, and forms a hollow square of four stories enclosing a courtyard 67 by 44 feet. The first two stories are of granite, the two upper stories of Pompeian brick. A granite seat runs the length of the front façade. This dormitory accommodates eighty-six students.

BLAIR HALL

Blair Hall, a Sesquicentennial gift of the late Hon. John Insley Blair, and built from the designs of Messrs. Cope and Stewardson, was the first representative of the style of architecture which has since been adopted for the later Princeton buildings. It is built of white Germantown stone, in the English collegiate Gothic style, and accommodates one hundred and fifteen students. The square massive central tower is pierced by an archway which, with the terraces and flight of steps, forms the entrance to the campus from the southwest. An addition, with a gateway tower, was erected by the late De Witt Clinton Blair, of the Class of 1856.

LITTLE HALL

Adjoining the southern end of Blair Hall and following out that building's line and style on a slightly lower level of ground is Stafford Little Hall, a dormitory accommodating one hundred and ten students, the gift of the late Henry Stafford Little, of the Class of 1844. It was erected partly in 1899 and partly in 1902 and forms, with Blair Hall at one end and the Gymnasium at the other, a series of architecturally harmonious buildings, marking the western confines of the central campus. This building was also designed by Messrs. Cope and Stewardson.

THE PYNE BUILDINGS

The Upper and Lower Pyne Buildings are located on Nassau Street, opposite the University campus. These buildings were erected in 1896 by M. Taylor Pyne, Esq., of the Class of 1877, and are in the half-timbered Chester style. They were designed by Raleigh C. Gildersleeve. Upper Pyne accommodates nineteen and Lower Pyne eighteen students.

SEVENTY-NINE HALL

Seventy-Nine Hall, a gift of the Class of 1879, is a development of the collegiate Gothic, and was designed by Benjamin W. Morris.

It is two stories in height, with a basement. The walls are of red brick, the trimmings of Indiana limestone. Toward the middle of the building and directly facing Prospect Avenue is a tower which forms the principal feature of an asymmetric composition. The building accommodates forty-eight students.

PATTON HALL

Patton Hall, furnishing accommodations for one hundred and three men, is the gift of the ten classes from 1892 to 1901, inclusive, and is named after President Francis L. Patton. This building, erected in 1906 from the plans of Benjamin W. Morris, is an addition to the line of Gothic architecture marking the western confines of the central campus. It is built of the same material and in the same style as Blair and Little Halls. It accommodates one hundred and nineteen students.

CAMPBELL HALL

This dormitory is the gift of the Class of 1877, and is named after John A. Campbell, Esq., president of the Class. The style is English collegiate Gothic, similar in type to that of Blair Hall, and of the same materials. It provides accommodations for sixty men. It was erected from the designs of Messrs. Cram, Goodhue and Ferguson.

HAMILTON HALL

This dormitory, built in 1911 from designs of Messrs. Day Brothers and Klauder, fronts on University Place and adjoins Holder Hall on the southwest. It accommodates forty-one students. It was erected chiefly by the gener-

osity of the Classes of 1884 and 1885. It is of the same style and material as Madison Hall and joins with it to form a quadrangle at the junction of University Place and Nassau Street.

CUYLER HALL

This dormitory joins Patton Hall and was built in 1912 from designs of Messrs. Day Brothers and Klauder. It is named in memory of Cornelius C. Cuyler, of the Class of 1879. Five of the six entries are the gifts of the Classes of 1881, 1882, and 1891, and of Mr. William E. Guy '65 and Mr. J. O. H. Pitney '81. The large entry at the southeast corner was built with funds contributed by a large number of alumni. It is of the same style and material as Holder and Hamilton Halls and provides rooms for sixty-eight students.

HOLDER HALL AND MADISON HALL

The northwest corner of the Campus is occupied by an imposing group of buildings, the eastern section of which forms the dormitory named Holder Hall, and the western section the Dining Halls, named Madison Hall.

The dormitory section of the group, forming four sides of a large quadrangle together with the great tower on Nassau Street, has been built through the generosity of Mrs. Russell Sage from designs of Day Brothers & Klauder. There are three sides available for the use of students, of whom one hundred and forty-nine can be accommodated. The fourth side consists of a cloister, the west wall of which serves as the eastern end of Madison Hall.

Madison Hall, named in honor of James Madison of the Class of 1771, consists of one building adjoining Holder Hall and containing two large dining halls, one building on Nassau Street containing one large and one small dining

hall, and one building on University Place containing two large dining halls, all of which are joined by corridors to a kitchen situated in the rear of the Nassau Street building.

This Dining Hall group has been erected through the further generosity of Mrs. Sage and subscriptions from the undergraduate classes, 1916, 1917 and 1918 and a large number of alumni and friends of the University.

GRADUATE COLLEGE BUILDINGS

The buildings and endowments of the Graduate College are mentioned on page 232.

The site of this group of buildings is on the crest of a slope in the western portion of the University Campus, two-thirds of a mile distant from Nassau Hall and on that portion of the Revolutionary battlefield of Princeton where the final engagement of the battle occurred. The surrounding grounds have been laid out and planted under the direction of Beatrix Farrand.

The body stone of all the buildings is the native bluish argillite with trim of Indiana limestone. The stone floors are of Vermont slate or terrazzo. Gray Germantown stone is used for the quoins of the Cleveland Tower.

The buildings have been designed and constructed in the perpendicular Gothic style by Messrs. Cram, Goodhue and Ferguson of Boston, in accordance with the plan of Mr. Ralph Adams Cram. The group is formed around a central quadrangle, Thomson College, which measures about two hundred and fifty by two hundred feet, enclosing a court and lawn of about one hundred and seventy by one hundred and thirty feet, and containing suites for over one hundred students, besides the kitchen, service quarters, breakfast rooms, common room and reading room.

Adjoining the main college gate at the southeastern corner of the quadrangle is the Cleveland Tower, forty feet square and one hundred and seventy-three feet high, containing in its base the vaulted memorial chamber of Indiana limestone, twenty-eight feet square and forty-eight feet high. At the eastern side of this room is built a stone base backed and surmounted by a Gothic arch, where it is hoped a bronze statue of President Cleveland may be placed.

The following inscription is carved on the arch in plain capitals:

IN REMEMBRANCE OF
GROVER CLEVELAND
PRESIDENT OF THE UNITED STATES
PUBLIC OFFICE IS A PUBLIC TRUST

The tower was erected in 1912 from public subscriptions of the people of the United States.

The southwestern corner of the quadrangle is completed by the Pyne Tower which contains the vestibule hall connecting the common room and Procter Hall, the suite for the Master in Residence, the guest rooms, and, above this, a large suite in the fourth story.

Projecting westward from the Pyne Tower is Procter Hall, the dining hall and chief public room of the Graduate College. The interior measures thirty-six by one hundred and eight feet. The floor is of Vermont slate, and the interior walls of buff Kentucky sandstone. The panelling and arching roof are in oak. A visitor's gallery with oak screen stands at the eastern end of the hall. The organ in this gallery, the gift of Henry C. Frick, Esq., consists of pedal, great, swell and choir organs, with an antiphonal organ placed in another part of the hall. The oak case was designed under direction of Mr. Ralph Adams Cram. At the western end there is a high oriel window on the south side and a large fireplace facing it on the north. Back of the high table is the brilliant memorial window in stained glass, designed and executed in the manner of the fourteenth century by Mr. and Mrs. William Willet. The portraits hung in Procter Hall have been given by Mr. Thomas Shields Clarke, of the Class of 1882.

Wyman House, the residence of the Dean of the Graduate School, stands adjacent to Procter Hall on the southwest.

LABORATORIES AND MUSEUMS

HALSTED OBSERVATORY

HENRY NORRIS RUSSELL, PH.D., *Director of the Observatory*

This observatory is appropriated to scientific work, chiefly in the department of astronomical physics. The building, the gift of the late General N. Norris Halsted, is of stone, with a dome thirty-nine feet in diameter, the power for moving it and its sliding shutter being furnished by an electric motor. In it is mounted the great equatorial, of twenty-three inches aperture and thirty feet focal length, made by the Clarks, and provided with all the usual accessories, micrometric, spectroscopic, and photometric. The building also contains a clock and a chronograph, and is in electric connection with the Observatory of Instruction.

OBSERVATORY OF INSTRUCTION

This observatory is devoted entirely to the use of students and is fully equipped for its purpose. It possesses an equatorial (by Clark) of 9½ inches aperture, with a full complement of spectroscopic and other accessories; a 5-inch camera (by Brashear), the gift of John Neilson, Esq.; and a measuring machine for astronomical photographs. It has also a 9-inch reflector, a 4-inch meridian circle, three transit instruments with 3-inch telescopes, two of them arranged for us as zenith telescopes; a chronograph, two standard clocks and five subsidiary clocks, one in each observing room. There are also a number of sextants, two chronometers, and all the other auxiliary apparatus required for carrying out the work in the courses on practical astronomy,

to accommodate which a room for lectures and recitations has been added.

PSYCHOLOGICAL LABORATORY

The laboratory for experimental psychology, established in 1893, at present occupies the entire third floor of the west wing of Nassau Hall. It comprises a lecture room, reading room, preceptorial rooms, dark-room, work-shop, and several rooms for graduate and undergraduate research work. The equipment consists primarily of the standard pieces of apparatus for demonstrations and research, together with illustrative models and charts, and is extended to meet the requirements of graduate research in any special direction. A select library of reference books and bound periodicals belonging to the department is kept in the reading room. A private psychological library of several hundred volumes, with current numbers of leading psychological, philosophical, and neurological journals, is also kept at the laboratory and is available to graduate students for consultation. The *Psychological Review* has been closely identified with the department at Princeton since 1894; one room in the laboratory is devoted to editorial and publishing purposes.

THE PALMER PHYSICAL LABORATORY

The Palmer Physical Laboratory, the gift of the late Stephen S. Palmer, Esq., was completed in 1908 and is devoted to the uses of the Department of Physics and Electrical Engineering. It was designed by Mr. H. J. Hardenbergh.

It is a two-story and basement building of brick and Indiana limestone and is academic Gothic in style. It is constructed with very heavy walls and with floors of steel,

tiling and concrete, is thoroughly fireproof, and possesses the greatest stability. It is built on a southern slope around three sides of an open court, thus assuring an abundance of light and air for the basement as well as for the two upper stories.

The building is heated by steam, with thermostatic control, is lighted by electricity, and is arranged for the artificial ventilation of any, or all, of its parts.

It contains two large lecture rooms, one for 325 persons and the other for 200, three smaller lecture rooms for sixty-five persons each, seven recitation rooms, each for twenty-five persons, four large laboratories and a number of smaller ones, rooms for the professors, for the library, the museum, and for research students. One large and two small machine shops are provided, rooms are set aside and equipped for the storage batteries, electrical charging machinery, and switchboards; and a chemical laboratory, a Roentgen ray room, constant temperature rooms and a grating room have been especially constructed, in addition to store rooms, balance rooms and photographic and photometric dark rooms. The three floors give a combined area of approximately two acres for the work of instruction and research.

The equipment includes four storage batteries, of sixty cells each, the necessary electrical charging machinery, a very extensive and flexible system of wiring for both direct and alternating currents, a refrigerating plant, a liquid air and hydrogen plant, a vacuum and pressure system leading to all parts of the building, a large machine shop with a full outfit of hand and machine tools, and an electric elevator running from basement to attic. A large equipment of apparatus is provided for lecture purposes, for laboratory work and for research.

Through the generosity of David B. Jones, Esq., and Thomas D. Jones, Esq., of the Class of 1876, a fund of $200,000 has been given for endowment, the income of which is used by the two departments occupying the laboratory, for the purchase of supplies, for the construction of apparatus, and for the satisfaction of the general scientific needs of the two departments.

BUILDINGS AND APPARATUS OF THE SCHOOL OF ELECTRICAL ENGINEERING

Ample accommodations for recitations, lectures and experimental work are provided in the Palmer Physical Laboratory. All of the equipment of the building and all of the apparatus of the Department of Physics are available for the use of the School of Electrical Engineering. The laboratory contains a full equipment of galvanometers, current balancers, direct and alternating current ammeters, volt-meters and watt-meters; frequency and power factor meters, resistances, bridges, and potentiometers; standards of resistance, inductance and capacity; Dudell and General Electric oscillographs, a Fleming cynometer, etc.

A room has been especially equipped for the comparison with standards, of the various instruments required in precise electrical measurements.

The dynamo building contains a complete equipment of electrical machinery, and is set apart entirely for experimental work and machine testing. The motive power for the machinery is furnished by a sixty-horse-power boiler and a Ball engine. The dynamo plant consists of a Westinghouse alternating current generator with a full set of transformers, a Westinghouse direct current generator, two Westinghouse rotary converters, Mather, Edison, Brush arc, Eickemeyer and Gramme generators, a machine con-

structed in the shop of the School of Science, General Electric, Westinghouse, Brush, Eickemeyer and other motors. With these machines is a complete outfit of accessories, and a large rheostat of German silver used in testing. Arc and incandescent lamps are so arranged that the various systems of distribution may be studied.

The University Power Plant, which is used for lighting and heating the university buildings, contains four 250, two 320, and two 365 horse-power boilers, for power and steam heating; two 200 k.w. and one to 100 k.w. direct-connected alternating current generators and one 300 k.w. alternating current generator, direct driven by a Curtis steam turbine; one motor-driven exciter and one steam turbine-driven exciter; the station switch-board and a special experimental switch-board. The entire equipment of generators, transformers, motors, etc., is available for the use of the School, for purposes of experimental study in which the quantities to be measured are of the order of those met in commercial applications.

CHEMICAL LABORATORIES

JOHN STOUT VAN NEST, PH.D., *Curator of Chemical Laboratories*

Most of the work of the Department of Chemistry is carried on in the Chemical Laboratory, which was erected and equipped in the year 1891 by the John C. Green Estate. It is of fireproof construction, well lighted, and ventilated by electric fans. The main portion is 108 feet long and 58 feet wide, with a wing 47 feet long and 42 feet wide.

The top floor of the building is devoted mainly to the laboratories for general inorganic chemistry and for qualitative analysis, in which each student has a separate desk, provided with water, gas, suction for filtering, and sink. A room specially equipped for gas analysis, a reading room, a

private laboratory, and two small storerooms are also on this floor.

On the second floor are two lecture halls, with a large preparation and apparatus room adjoining them; a well equipped laboratory for quantitative analysis with adjacent balance room and store room; and three private laboratories.

The entire first floor of the wing of the building is devoted to physical chemistry. In the main portion are located a laboratory for advanced work and research in general chemistry, a private laboratory and the principal stock and store rooms. A laboratory for special work in advanced inorganic chemistry is located in the basement of the School of Science.

The laboratories for organic chemistry occupy a separate building, the Class of 1877 Laboratory, where excellent equipment is provided for elementary, advanced, and research work.

GUYOT HALL

The Natural Science Departments are housed in Guyot Hall, which was erected in 1909 from the designs of Messrs. Parrish and Schroeder.

This building is situated at the southeast corner of the campus on the southerly slope below the Palmer Physical Laboratory, and beyond it fields, woods and brooks extend down to Lake Carnegie, thus affording excellent opportunities for biological gardens and vivaria. The inside dimensions of the building are 288 feet long and 56 feet wide, with a south extension 63 feet long by 35 feet wide. Its central section has a basement and four stories, and the ends and extension have three and two stories respectively. With a cubical content of about 1,250,000 cubic feet it has a total serviceable floor space of about 85,146 square feet.

Architecturally it is a successful application of the English Gothic style to the strict requirements of modern laboratory construction. The chief material used is brick of variable light red tone with Indiana limestone trimmings, and the construction is fireproof, being of steel, reinforced concrete, and plaster block.

The approved features of modern laboratories of this class have been adopted; simplicity of design, stability, fireproofing, maximum of window lighting, use of sound-proof though easily removable partitions, with generous provision of electric illumination and power, gas, and water supply. Two freight elevators, one electric, the other hand power, run from cellar to top floor. The general artificial illumination is provided by the alternating current system, and a 30 k.w. motor-generator set furnishes direct current for the projection and photo-illumination apparatus. Abundant gas supply is at hand for secondary illumination and heating on laboratory tables. Natural ventilation is relied on to a large extent, almost entirely so in the west end of the building. A ventilating plant provides tempered forced draft and exhaust for the corridors, museum, lecture room, reading room, and certain laboratories where noxious fumes and odors may be generated. Independent minor exhaust systems care for the proper circulation of the photographic rooms.

The Departments of Biology and Geology occupy approximately equal portions of the building, Biology having the eastern and Geology the western end, and certain rooms are used in common; i.e., the museum room, the large lecture room, the general library and reading room. The museum occupies the entire first story, having a height of 18 feet, and, with its gallery along the south side of the central section, affords about 19,300 square feet of floor space. The

lecture room, central in the basement, with 210 seats, has brilliant natural and artificial illumination, and is provided with all appurtenances needed for conducting lecture courses and meetings of scientific societies. The library, centrally located on the second floor, has a reading room space of 25 x 25 feet and lateral stacks holding the working libraries of the biological and geological sciences, with capacity for about ten thousand volumes.

The laboratories are arranged in ten separate suites, each suite as a rule accommodating a distinct subject, and five suites are in each department. In addition there are rooms for graduate students and for investigators, seminary rooms, a club room for students of the Department of Geology, machine shops, curatorial, preparation, and store rooms, and finely equipped quarters for photographic work. Special rooms are designed for seismographical and meteorological stations. Excluding several rooms used for janitorial and other purposes, 103 rooms are devoted to the work of the scientific departments.

THE NATURAL SCIENCE MUSEUM

WILLIAM LIBBEY, D.Sc., *Director of the E. M. Museum of Geology and Archaeology*
WALTER MEAD RANKIN, PH.D., *Curator of the Herbarium*
ALEXANDER HAMILTON PHILLIPS, D.Sc., *Curator of Mineralogy*
GILBERT VAN INGEN, *Curator of Invertebrate Palaeontology*
WILLIAM JOHN SINCLAIR, PH.D., *Curator of Vertebrate Palaeontology and of Prehistoric Archaeology*
CHARLES FREDERICK SILVESTER, *Curator of the Zoological Museum*
BENJAMIN FRANKLIN HOWELL, A.M., *Assistant Curator of Geology*

The Natural Science Museum, occupying the first floor of Guyot Hall, with a floor area of about 19,300 square feet, contains the collections formerly included in the E. M. Museum of Geology and Archaeology, the storerooms of the

Department of Geology, the Museum of Biology, the Class of 1877 Morphological Museum, and the Mineralogical Museum of the John C. Green School of Science.

The Zoological Collections are especially rich in osteological and ornithological material. The former includes a large number of mounted and disarticulated skeletons of fishes, reptiles, birds and mammals. The collections of mounted and unmounted bird skins are especially large, including some sixteen thousand individuals, representing very completely the avifauna of New Jersey, and in part that of North America, Europe, Indo-Asia, Australia, and South America. These collections are supplemented by some four thousand sets of eggs, most of them in nests.

The Collections of Invertebrata include a complete series of specimens prepared by the zoological station at Naples, as well as a large series of corals and shells of molluscs.

The Morphological Museum contains about twenty-six hundred preparations, illustrating the comparative anatomy of vertebrates. This collection, which consists of dissections and corrosions, is being increased constantly at the rate of about three hundred preparations a year, all of which are prepared in the laboratory by the curator and his assistants.

The Histological Collection is located on the second floor of the building and consists of some thirty thousand mounted microscopical specimens illustrating the various forms of tissues of many different animals. Some five thousand specimens are stored in paraffin blocks.

The Botanical Collections are arranged on the third floor and include, besides certain illustrative specimens, models and charts, a herbarium of mounted plants classified according to Engler and Prantl's *Pflanzenfamilien*. The herbarium includes a local collection, representing the New Jersey flora, of four thousand sheets; some forty thousand sheets of

plants from different sections of the United States, from South America, Europe, and Asia, and ten thousand sheets of mosses, recently acquired from Dr. Per Dusén of Sweden.

The Geological Museum has exhibits arranged in three general groups to show the structure, the history, and the ancient life of the earth.

The central portion of the west hall is devoted to exhibits of the structural materials that make up the crust of the earth, the minerals and rocks, and of specimens that show tectonic features of the crust, and the modes of occurrence of economic minerals and ores.

At the end of the west hall is a synoptical collection illustrating the geology of the vicinity of Princeton.

The cases around the sides of the west hall are arranged on the enclosed-alcove plan, forming a continuous series of small rooms. Each room is devoted to a period of geological time, and the contained exhibit consist of rocks, fossils, maps, and labels illustrating and describing the history of the period.

The west half of the middle hall contains the exhibits of the ancient vertebrate life of the earth. Several fine fossil skeletons of tertiary mammals are mounted in natural positions.

The archaeological and ethnological exhibits, occupying the entire gallery, portray the culture of various races of Palaeolithic, Neolithic, and savage mankind.

Circulars describing the exhibits are issued from time to time. Two have appeared: The Archaeological Ethnological Collections, and the Princeton Local Geology Collection.

The teaching collections, placed in the laboratories, are arranged in series that illustrate the various courses of instruction. In addition there are reserve collections available for advanced study and research, and collections that have

been accumulated in the course of investigations prosecuted by the officers of the department.

The teaching and study collections are being rapidly augmented through the field trips conducted as part of the regular work of the Department of Geology, and through the summer field work prosecuted in various regions by the officers and graduate students.

THE GEOLOGICAL LABORATORIES

The laboratories of the geological sciences occupy the western half of Guyot Hall, and have a floor area of about 19,700 square feet, of which about 13,800 square feet are devoted to the various phases of the instruction work and the remainder to preparation and curatorial purposes. The museum, general lecture room, and library are shared in common with the Department of Biology. The geological library has about six thousand, five hundred volumes.

Distinct suites of apartments are devoted to the following lines of study: Structural Geology, Petrology and Economic Geology, Mineralogy, Physical Geography, Stratigraphy and Invertebrate Palaeontology, and Vertebrate Palaeontology. There are in addition a large graduate laboratory and several small rooms for carrying on special investigations. A suite of rooms is designed for the illustration work of the Department of Geology, comprising an artist's studio, photographic studio for lantern slide and photomicrography as well as for ordinary camera work, a room for blue-printing, and four dark rooms, of which three may be assigned to graduate students. Seismographic and meteorological stations are designed, but not yet equipped.

The club room for the departmental students is located on the second floor, and is provided with literature pertaining to the undergraduate courses in geology, and also with standard works in the allied sciences.

Further details regarding the resources and collections of the Department of Geology may be obtained by consulting the Announcement of the Department of Geology, which is procurable at the office of the Secretary of the University.

THE BIOLOGICAL LABORATORIES

The Biological Laboratories are located in the east half of Guyot Hall and, in addition to the museums, comprise the library, laboratories, research rooms and seminary rooms of the Departments of Zoology, Physiology, and Botany.

The Biological Library consists of about fourteen thousand volumes. It contains sets of the principal biological periodicals, as well as standard reference books and monographs. Through the generosity of Charles W. McAlpin, Esq., of the Class of 1888, several hundred volumes are added to it each year.

The Zoological, Anatomical, and Histological Laboratories include five classrooms, equipped as laboratory-lecture rooms, seven private research rooms, two preparation rooms, a chemical room, two photographic rooms, an artist's room, and six storerooms.

The Physiological Laboratory comprises one large laboratory-lecture room, two smaller laboratories, two private research rooms, a photographic room, and a shop; it closely adjoins the animal rooms in the sub-basement and vivarium.

The Botanical Laboratory includes two laboratory-lecture rooms, four private rooms, and the herbarium room. A glass house and vivarium afford at all seasons a considerable variety of land, fresh-water, and marine plants for study. A greenhouse 22 x 100 feet, with headhouse 15 x 24 feet, has been erected and fully equipped for experimental work in genetics, and about fourteen acres of level land to the

south of Guyot Hall have been set apart and specially prepared for the growing of pedigree-cultures.

VIVARIA

The study of living plants and animals is a most important part of Biology, and unusual facilities are here offered for such study. In addition to the natural advantages of the situation, afforded by the presence in the immediate vicinity of the laboratory, of fields, woods, brooks, Lake Carnegie and the canal, especial preparations have been made for keeping under experimental and observational conditions a considerable variety of animals and plants. The vivarium is a separate building with glass roof and large concrete aquaria; the latter having an aggregate area of nearly four hundred square feet, one half of which is devoted to sea-water and the other half to fresh-water. In addition there are rooms with suitable cages for keeping insects, amphibians, reptiles, birds, and mammals; also private research rooms, photographic rooms, and pump rooms. Adjoining the building are flying-cages for birds, runways for mammals, and a greenhouse for plants. Near the vivarium a biological pond has been formed by damming up a brook, and various cages and retreats will be established as they are needed along the brook and in the woods where many animals may be kept and studied under natural conditions.

CIVIL ENGINEERING LABORATORY AND APPARATUS

Through the generosity of the trustees of the John C. Green Estate a separate building has been provided and equipped with suitable apparatus for training the students in civil engineering in the laboratory work of engineers. The building covers an area of about 7000 square feet and

contains the cement-testing, the testing of materials, the hydraulic, and the heat engine laboratories.

The cement room contains the usual apparatus of a standard cement-testing laboratory.

The testing of materials laboratory contains four electrically driven direct tension and compression machines, the largest having a capacity of 200,000 pounds with ten-foot extension head and twenty-foot extension arms for cross bending tests; a torsion machine; bending machines of 10,000 and 100,000 pounds capacity respectively, the latter capable of taking wide beams such as slabs, tee beams, etc.; extensometers, deflectometers, strain gauges, and other apparatus for precise measurements; a portable crane; an engine driven concrete mixer; standard steel forms for reinforced concrete beams and columns; and the other accessories for efficient work.

The hydraulic room is very complete in provisions for the control of pressure and volumes, and is unique in its use of large quantities of water in a very economic manner.

The heat engine equipment contains a steam boiler of about seventy horse power to furnish power and the means of conducting evaporation tests; a steam engine of fifty horse power provided with a dynamometer, and other apparatus for testing power and efficiency; and an Otto gas engine of about six horse power.

The work of the several laboratories is intended to supplement the corresponding theoretical studies, to make tests of structural forms and materials; to conduct trials of steam, gas, and other motors; to deduce from actual experimental laws and coefficients of flow through various kinds of orifices, weirs, and conduits; and to make reliable tests of cement, mortars, and concretes.

The instruments provided for the course in geodesy rep-

resent the work of several instrument makers of high repute. They include a 12-inch geodetic transit; a large plane-table with a telescopic alidade and a telemeter; engineers' mining and solar transits; wye and dumpy levels; surveyor's compasses; mercurial and aneroid barometers; sextants; heliotropes; numerous forms of standard linear measures; and a large assortment of reconnoitering instruments.

THE MUSEUM OF HISTORIC ART

ALLAN MARQUAND, PH.D., L.H.D., *Director of the Museum of Historic Art.*

The upper story of the museum contains a library of books and photographs for classical and mediaeval archaeology, collections illustrating the history and processes of the graphic arts, collections of Greek and Roman coins and gems, specimens of Greek and Roman marble, a collection of bronze medals and casts of ivories from the Roman to the Gothic period, a series of casts from the Arch of Trajan at Beneventum, and a small collection of paintings. One room is devoted to exhibiting the results of the Princeton Expeditions to Syria. Here, besides casts of sculpture and inscriptions, are many examples of Syrian workmanship in stone, terra-cotta, glass, bronze, and gold.

In the central story the Trumbull-Prime collection has been rearranged and new cases have been added. The purpose of this collection is to illustrate the history of pottery and porcelain. Egypt is represented by sepulchral figurines, beads, and amulets; Phoenicia by numerous Cypriote vases; Greece, Etruria, and Southern Italy by Corinthian aryballoi and fine examples of larger vases of black-figured and red-figured types. The Orient is further illustrated by specimens from Persia, China, and Japan; America by Mexican and Peruvian pottery. The collection is richest in examples

of European wares, to which England, France, Germany, and Holland are the chief contributors, but Italy, Russia, Sweden, and Switzerland are also represented. The small room of this story contains the Livingston collection of pottery. This collection is noteworthy for the illustrative material it furnishes for the early history of our country.

The staircase and basement are occupied by a carefully selected collection of casts of ancient and mediaeval sculpture, presented by the Class of 1881 at its decennial. This collection was formed to illustrate the history of ancient sculpture in Egypt, Babylon and Assyria, Persia, Greece, and Rome, and of mediaeval sculpture in Italy, France, and Germany. There has been recently added from the same fund a collection of casts of Renaissance sculpture.

The museum is open to visitors from 9 A. M. to 5 P. M., and from 8 to 10 P. M.

LITERARY SOCIETIES

The Cliosophic and American Whig Societies were founded prior to the Revolution. They occupy two marble buildings on the campus, containing auditoriums, reading and lounging rooms, and libraries. They are managed by undergraduates, but include in their membership most of the graduates and officers of the University. They follow the usual course of literary societies, awarding numerous prizes—some of exceptional value—for orations, essays, and debates, and conferring diplomas on those who complete the prescribed courses. Older graduates of Princeton have considered the training of the Halls one of the most valuable parts of their college experience. A freshman course in public speaking and debate under expert direction and official sanction, open only to Hall members, is now conducted in the Halls under the direction of the Department of English, as an alternate to the regular freshman course in English literature. This course is specially planned for students looking forward to public careers. A vigorous competition for University honors has always prevailed between the two societies and it is from their representatives that the intercollegiate debating teams are selected which meet representatives from Yale and Harvard each year in a triangular debate. The Halls also provide their members with the advantages of social clubs, which are especially appreciated by the freshmen and sophomores, and by the juniors and seniors who are not connected with the upperclass clubs. Probably half the student body are members of one or the other of the Halls. Until recently these societies were secret, but they now have an agreement whereby members of each society enjoy free access to the building of the other.

ATHLETIC GROUNDS AND BUILDINGS

UNIVERSITY FIELD

This field, which prior to the erection of the Palmer Memorial Stadium was the scene of all the principal university athletic contests, is now used chiefly for baseball. The new entrance gateway at the front of William Street is the gift of Cyrus H. McCormick, Esq., of the Class of 1879. The wall and gateway on Prospect Avenue, built in 1911 from designs by Messrs. McKim, Mead and White, were given by the late Ferris S. Thompson, Esq., of the Class of 1888. In connection with the field there are the following buildings: (1) The University athletic clubhouse, the gift of Professor Henry F. Osborn, of the Class of 1877, containing training quarters, dining room, parlor, bedrooms, baths, etc.; (2) the cage for indoor winter practice, a well-lighted brick structure with a clear floor space of 60 x 140 feet; (3) the field house, containing dressing-rooms, lockers, and baths for the University and visiting teams; (4) the grand stand, the gift of Mrs. John J. McCook, of New York, the clock in the peak of the roof being the gift of the glee club of 1890; (5) the open stands, built by alumni subscriptions.

THE BROKAW MEMORIAL

The Brokaw Memorial Gateway and Building were erected in 1892 by I. V. Brokaw, Esq., of New York, in memory of his son, Frederick Brokaw, of the Class of 1892. A wing of this building contains a concrete swimming pool, lined with white tile, 100 feet long by 25 feet wide, which is architecturally combined with the Gymnasium. The Brokaw Building contains also three handball courts and dressing rooms for the swimming squad and for visiting teams.

THE GYMNASIUM

The gymnasium, erected by the alumni, is situated toward the southwest end of the campus. In style of architecture this building conforms to the collegiate Gothic of Blair, Little, and Patton Halls, and the material used is the same Germantown stone. These four buildings, harmonizing in style and general effect, form an almost unbroken western boundary to the central campus, nearly half a mile in length.

The façade of the gymnasium comprises two full stories and a tower. The main entrance opens into a trophy hall 50 feet wide by 130 feet long, paneled in English oak and with an exposed-beam roof. This hall affords space for a large number of athletic trophies, offices for the members of the Department of Hygiene and Physical Education, a physical examination room, and rooms for fencing, boxing, and wrestling. The hall is surrounded by a gallery which is used for trophies and banners.

The gymnasium proper is entered through the trophy hall. It is 166 feet long and 101 feet wide, and is almost as high as the two-story portion of the building. Its roof is supported only by the side walls, so that the interior is unobstructed. About its walls is an elevated running-track, twelve laps to the mile. It contains, besides the main hall, which is equipped with apparatus for physical training and competitive games, locker and dressing rooms, lavatories, hot and cold shower baths, seven handball courts, and a rowing room equipped with sixteen machines for crew practice. The gymnasium is open daily throughout the university year.

FIELDS AND COURTS

The Brokaw Field was provided in 1896 by the alumni for the benefit of undergraduates who are not members of

university teams. It contains three baseball diamonds and a 120-yard straightaway running track. Goldie Field, named after Mr. George Goldie, for many years Director of the Gymnasium, was constructed in 1911 closely adjoining Brokaw Field and is large enough for a baseball diamond and three soccer fields. There are twenty-eight tennis courts on terraces bordering these fields. Poe Field was laid out in 1916, in memory of John Prentiss Poe, of the Class of 1895, who was killed on September 25, 1915, in France while serving in the British Army. This field, which is located immediately south of Goldie Field, is 375 feet by 600 feet and provides space for two baseball diamonds or three football fields.

CLASS OF 1886 MEMORIAL BUILDING

This building, presented to the University by the Class of 1886, is located on the Princeton golf course. The building contains ample provision in the way of bath and locker rooms, reception rooms, etc., designed for the use of members of the Princeton Golf Club, with dormitory and kitchen facilities for the use of the members of the Class of 1886 during their reunions.

THE PRINCETON GOLF CLUB

Students of the University are eligible to membership in the Princeton Golf Club upon the payment of the annual dues of $20. The year extends from September to September. The eighteen-hole golf course covers 225 acres and is situated on university property.

CLASS OF 1887 BOAT HOUSE

This building, erected by the Class of 1887, was completed in 1913. It is located on the shore of Lake Carnegie, to the west of Washington Road. The style of architecture is

Gothic, and the material used is reinforced concrete. It was built from the designs of Pennington Satterthwaite, of the Class of 1893. The dimensions of the buildings are 170 by 100 feet. The first floor contains accommodations for thirty-two shells and a workshop. On the second floor are two locker rooms, a large club room, and an office for the rowing coach.

THE PALMER MEMORIAL STADIUM

The Palmer Memorial Stadium is the gift of Edgar Palmer, Esq., of the Class of 1903, and was erected by him in 1914 as a memorial to his father, the late Stephen S. Palmer, a trustee and generous benefactor of the University, the donor of the Palmer Physical Laboratory. The Stadium is erected upon the tract known as the College Farm, which is leased by the University to the Athletic Association. It is a U-shaped structure with the open end towards the south, permitting a view of the woods along Lake Carnegie, with glimpses of the lake in the distance. It is built of reinforced concrete throughout and seats a few more than forty-one thousand spectators. Entrance to the Stadium is effected from a covered concourse which runs completely around the Stadium, under the structure itself. From this concourse inclined planes, or ramps, lead to the central line of the area reserved for seats. Aisles lead up and down from the outer ends of these ramps, by means of which spectators pass at once to their seats. A broad promenade is erected back of the last row of seats and runs completely around the Stadium, permitting of easy access from one side to the other. The players' entrance leads directly to the level of the field through a tunnel especially constructed for their use. A generous provision of washrooms and toilet rooms, for both men and women, is made under the Stadium itself.

The Stadium is used for football and track athletics. The playing field is specially designed and constructed, with a very extensive drainage system to provide for complete and quick drainage of all parts of the field. The running track consists of a quarter mile track with two hundred and twenty yard straightaway.

Twenty acres of meadow land adjoin the Stadium directly to the east and give ample parking space for all vehicles which may be brought to the largest games.

The Stadium was designed by Mr. H. J. Hardenbergh.

NINETEEN ELEVEN FOOTBALL TEAM FIELD HOUSE

The Nineteen Eleven Football Team Field House, erected near the Stadium, is the gift of Cyrus H. McCormick, Esq., of the Class of 1879, as a memorial to the Nineteen Eleven Football Team. It is used as a dressing room for the members of the football and track teams and for members of visiting teams in those two sports. It provides ample accommodations for two hundred and fifty men. It is designed to harmonize with the Stadium. This building was also designed by Mr. H. J. Hardenbergh.

PRINCETON UNIVERSITY PRESS

The building of the Princeton University Press, erected and equipped by Charles Scribner, Esq., of the Class of 1875, was completed in 1911. It is located on William Street, between the campus and the University Field. The building is collegiate Gothic in style, and is planned in the form of letter H, with a large court which is separated from the street by a battlemented wall. It was designed by Mr. Ernest Flagg. The material is the local Princeton stone.

The Princeton University Press has been organized under the act providing for "associations not for pecuniary profit," and its objects, as set forth in its charter, are "in the interest of Princeton University to maintain and operate a printing and publishing plant for the promotion of education and scholarship, and to serve the University by manufacturing and distributing its publications."

A complete catalogue of publications of the Press may be had by addressing the Princeton University Press, Princeton, N. J.

PRINCETON UNIVERSITY STORE

The Princeton University Store is a coöperative association, membership in which is open to all students and other members of the University upon the deposit of a small fee. The store deals in textbooks used in the University, stationery, athletic goods, Princeton souvenirs, confectionery, etc. The members of the store have the privilege of purchasing at a discount from the regular retail price and in addition receive a yearly dividend based on the total amount of their purchases.

PART IX

EXPENSES, ALLOTMENT OF ROOMS, UNIVERSITY DINING HALLS, UNIVERSITY BILLS, PRIZES, REMISSION OF TUITION, SCHOLARSHIPS AND CHARITABLE FUNDS

EXPENSES

*Board, 36 weeks.....$7.00 per week
Washing, 36 weeks .....75 cents per week
†Tuition and Public Room fee.....$200.00 per annum
Library fee.....$5.00 per annum
‡Laboratory fee, extra for chemical
courses involving laboratory work.....$7.50 to $18.00 per term
Laboratory fee, extra for the courses
Physics 101, 102; Physics 201, 202.....$5.00 per annum
Apparatus deposits (see below)
Room rent in dormitories (according
to location of room) .....$23.00 to $250.00 per annum
Heat, fixed charge (according to lo-
cation of room) .....$10.00 to $28.00 per annum
Light, fixed charge (according to
location of room) .....$12.00 to $28.00 per annum
Infirmary fee .....$7.00 per annum
Department of Physical Education fee.....$10.00 per annum
Matriculation fee, payable upon matriculation.....$5.00
Graduation fee, payable second term,
senior year $12.00

Apparatus Deposits.—Students pursuing laboratory courses are required to make deposits to pay for apparatus injured or destroyed. At the end of the term any excess in favor of the student is placed to his credit on the bill for the next term. The deposits in the courses are: General

* Freshmen and Sophomores are required to board at the University Dining Halls. The rate of board for the year 1917-1918 will be $7.00 per week, but students who are unable to pay the full price are given an opportunity to secure employment as waiters at the Dining Halls and thereby earn all or a part of the price of board.

† Remission of Tuition is granted under certain conditions to students needing assistance. For full information regarding Remission of Tuition, see page 429.

‡ Use of Chemical Laboratory, one afternoon a week $7.50 per term; two afternoons a week $13.00 per term; three afternoons a week $18.00 per term.

Physics—$5; Chemistry—$10 to $15 for each course (two terms). In Geodesy—freshmen, second term, $10; sophomores, second term, $15; juniors, both terms, $10; seniors, first term, $5.

Students taking any of the courses in graphics will require a drafting outfit costing from $18 to $25.

ESTIMATE OF ANNUAL EXPENSES

UNDERGRADUATE

Average minimum, medium, and maximum estimates of the necessary expenses for one year of a student occupying an unfurnished room in a dormitory have been prepared as follows:

	Min.	*Med.*	*Max.*
*Board, 36 weeks at $7.00	$252.00	$252.00	$252.00
Washing, 36 weeks, at 75 cents per week	27.00	27.00	27.00
†Tuition and Public Room fee	200.00	200.00	200.00
Library fee	5.00	5.00	5.00
Infirmary fee	7.00	7.00	7.00
Department of Physical Education fee	10.00	10.00	10.00
Room rent	30.00	100.00	200.00
Heat (per room)	10.00	19.00	28.00
Light (per room)	12.00	20.00	28.00
Matriculation fee (entering students)	5.00	5.00	5.00
Graduation fee (seniors)	12.00	12.00	12.00

Laboratory fees for courses in chemistry and physics, apparatus deposits, books, Hall dues, clothes, furnishings for rooms, incidentals, and traveling and vacation expenses have not been included in these estimates.

* Freshmen and Sophomores are required to board at the University Dining Halls. The rate of board for the year 1917-1918 will be $7.00 per week, but students who are unable to pay the full price are given an opportunity to secure employment as waiters at the Dining Halls and thereby earn all or a part of the price of board.

† Remission of Tuition is granted under certain conditions to students needing assistance. For full information regarding Remission of Tuition, see page 429.

RULES GOVERNING THE ALLOTMENT AND RENTAL OF ROOMS

I. Rooms will be assigned *members of the University* for occupation during the following academic year between the 15th of May and 1st of June of each year.

II. This assignment will embrace:

(*a*) All rooms occupied by students whose connection with the University will terminate at the end of the academic year.

(*b*) The rooms of all seniors, whether with room-mate or not (unless the room may be retained by a graduate or for a brother, as elsewhere provided in the rules).

(*c*) All rooms for which the lease has not been properly renewed.

III. An allotment may also take place at the close of the first term of each academic year for the purpose of assigning such rooms as may then fall vacant.

IV. (a) The assignment of rooms will in all cases not herein specially excepted take place in such a manner that specific rooms shall be assigned by lot.

(*b*) The rooms to be assigned are classified according to the amount of their rental, without heat and light, in eight groups as listed on pages 409 to 413. The rental in all cases includes the necessary painting, papering, etc.

(*c*) The applicants for rooms will be divided into corresponding groups, each applicant being required to inform the Treasurer in writing before the 10th of May, or the 20th of January, as the case may be, both of his intention to enter the drawing and of the group in which he wishes to be placed.

Every applicant for a room shall agree beforehand, and shall be required, to take the room which may be assigned to him by lot in the group in which he has made application.

(*d*) Each drawing will begin with the first group and proceed from that group successively through the several higher groups. Any applicant who does not obtain a room in the group to which he first asked to be assigned may be allowed to draw in the next higher group.

(*e*) If there be any rooms remaining unassigned after a drawing, such rooms may be assigned by subsequent allotment at such time before the end of the year or of the term as the Treasurer may appoint; such supplementary allotment to be made under the same rule as the principal allotment, with this exception, that the rooms disposed of by means of it may be classified in the same way or not, at the discretion of the Treasurer.

(*f*) a. Priority in the drawing will be determined by the length of time the applicants have been members of the University. The first drawing will include the names of all applicants who have been members of the University for more than one year. A second drawing will include the names of all applicants who have been members of the University one year or less.

b. If the application for a double room is signed by students who have been members of the University different lengths of time, it will be classified and placed in the drawing in which the student who has been a member of the University the shortest length of time would be placed.

(*g*) a. On or before the 5th day of May there will be drawn by lot from all single and double rooms available for occupancy in the fall, accommodations for *150 entering freshmen,* equitably distributed among the several groups according to rental.

b. The Registrar of the University will send to all candidates for admission to the *freshman class,* who have been *admitted at the June examinations,* a statement of the location and number of rooms reserved throughout the dor-

mitories for the use of freshmen, together with the rental to be charged in each case, and a statement of the owner's valuation of the furniture which may have been left in any of the rooms. The student to whom a room may be allotted is under no obligation to purchase furniture which may have been allowed to remain in the rooms as the property of the former occupant. Accompanying this statement will be a form of application blank which may be filed with the Treasurer at any time prior to July 23, upon which the entering student may indicate in what group he desires to draw for a room and whether, in the event of his failure to draw a room in the group first chosen, he is willing to enter his application in the next higher group.

(*h*) Double rooms are separately classified and allotted in accordance with the above regulations. Only such suites as consist of a study and two bedrooms are considered double rooms within the meaning of this clause. No double room can be assigned to a single individual, nor is it within the privilege of any single individual to draw for a double room. Every application for a double room must contain the names of two persons who intend to occupy the room together and who undertake to be jointly responsible for the rent of the same.

(*i*) Whenever for any reason one of the occupants of a double room is permitted or obliged to cancel his room lease, the remaining occupant must vacate the room at the end of the current academic term, unless he agrees to pay the whole rent, or provide a room-mate who shall join him in signing a new lease for the remainder of the academic year.

V. (*a*) The tenure and liabilities of those to whom rooms are assigned under these rules shall be the tenure and liabilities expressed in the following lease, which must be signed in the case of each room allotted by the student who

is to occupy it, and by his parent or guardian. This lease must be signed and delivered to the Treasurer in each case within ten days of the allotment, except in the case of new students, provided for under Rule 4g.

"This agreement, made the day of 191 , between the Trustees of Princeton University and of witnesseth, that the said Trustees of Princeton University do hereby lease unto the said Room No. in the Entry of , to hold for the academic year of , paying therefor during the said term unto said Trustees of Princeton University the yearly rent of $ in two equal payments to be made the one within the first four weeks of the first term of the academic year, the other within the first four weeks of the second term of the academic year.

"And the said covenants to pay the said rent in the manner and at the times aforesaid, and to deliver up the said premises to the said Trustees of Princeton University or its legal representative at the end of said term in as good condition as the same are or may be put into by the said Trustees of Princeton University, reasonable use and wear and tear thereof, and fire and other casualty excepted. The said lessee also covenants that he will not do or suffer to be done any damage in the leased premises, and that, if any damage beyond reasonable wear and tear be done, he will cause the same to be made good as soon as possible at his own expense, employing for that purpose the proper University workmen, and paying the costs thereof at once to the University Treasurer, it being understood that the damage here meant includes the breakage of glass and locks, whether by accident or design. The said lessee further covenants that he will not sublet the same or any part thereof, nor permit any other person or persons to occupy the same or any part thereof, nor make nor suffer to be made any alteration therein without the consent of the said Trustees of Princeton University for that purpose in writing first had and obtained. And the said lessee further covenants that the said Trustees of Princeton University through their authorized representatives may enter the said premises for the purpose of viewing or making improvements therein at any reasonable times in the daytime, or at any other time for the legitimate purposes of University discipline. This lease is made on the express condition that it may be terminated by said Trustees through their representative."

(*b*) Any occupant of a college room may retain his room until the end of his undergraduate or graduate course, provided he annually notify the Treasurer of his intention of retaining it and sign a new lease before the 1st of May; otherwise his room will be considered vacant and will be included in the next allotment. In case an accupant of a double room be left without a roommate at the end of the academic year, he may renew his lease upon condition of naming another student of the University who will become joint lessee with him for the following year, unless the roommate who leaves is a senior or a fourth-year special. It will also be the privilege of any occupant of a college room to renew his lease at the end of his own tenure in the name of his brother, when that brother is to enter the University immediately.

(*c*) The right to occupy a room is not transferable and terminates with the expiration of the lease. Any attempt on the part of the occupant of a college room to sell or transfer, directly, or indirectly, his right of occupancy will be deemed a fraudulent transaction. The penalty for violating this rule will be forfeiture of the room by the new lessee.

(*d*) The occupant of a college room shall deposit with the Secretary of Business Administration the sum of 25 cents for each key to his room that may be furnished him by the University; and all amounts paid under this clause will be refunded upon return of the key or keys furnished.

VI. (*a*) The seller and buyer of furniture in rooms allotted to students now in college will be required to file in the office of the Secretary of Business Administration, on or before June 15, a statement signed by each of the students concerned and by their parents or guardians, to the effect that they have agreed upon a mutually satisfactory price for such of the furniture as the buyer is willing to purchase.

In the absence of such an agreement being filed on or before June 15, the owner of the furniture will be notified to remove it immediately. If this notice is not complied with, the furniture will be sold by the University authorities.

(*b*) If any of the rooms drawn and held in reserve for the next incoming freshman class contain furniture, the owner of the furniture will be informed that it must be removed not later than the day in September when the dormitories are opened for occupany; unless the freshman to whom it is allotted shall elect to purchase it at the price fixed by the owner.

VII. No exchange of rooms will be allowed unless formally sanctioned in writing by the Treasurer; and then only upon terms explicitly stated in a written application signed by both parties to the proposed exchange, and not in contravention of the spirit of these rules. Such application will be kept on file in the Treasurer's office.

VIII. When rooms are vacated during a term, the rent must be paid until the end of the term. An occupant of a college room who expects to be absent on leave for a term may be released from the obligations of his lease, provided he notify the Treasurer before the beginning of the term during which he expects to be absent, and give up the room; but no abatement or drawback of room rent will be allowed for any period less than a term, except in special cases to be stated in writing, and by permission of the Treasurer.

The Faculty of the University is directed to suspend or expel every student that may be found guilty of breaking or evading these rules or of injuring or interfering with the person or property of his successor in a room; or of aiding or abetting another in such transgression, evasion, injury, or interference. The Faculty and all its officers are instructed to take the utmost pains, by ordinary or extraordinary means, to discover such offenders and prevent such offenses.

The Faculty is further instructed to report, with the evidence discovered, the names of any graduate or outsider that may be guilty of such offenses to the Committee on Grounds and Buildings; and said committee is authorized and directed to procure legal counsel and when the evidence seems to justify it to take appropriate legal proceedings against any and every offender before a court of law.

LIST OF DORMITORY ROOMS

FIRST GROUP ($20.00-$43.00 a year)

48 SINGLE ROOMS

$20.00	(5)	Hamilton: 1 A; Reunion: 16 S M; 17 S M; 18 S M; 19 S M.
30.00	(6)	Dod: 12 N; 12 S; 7 M; Edwards: 2 N; 5 N; 10 S.
35.00	(10)	Edwards: 7 N; 8 N; 32 N; 35 N; 7 S; 8 S; 37 S; 40 S 41 S; 42 S.
36.00	(4)	West: 3 N; 4 N; 3 S; 4 S.
40.00	(23)	Hamilton: 306; 307. West: 9 S. Edwards: 1 N; 9 N; 10 N; 12 N; 15 N; 22 N; 25 N; 37 N; 38 N; 39 N; 40 N; 2 S; 5 S; 9 S; 17 S; 20 S; 27 S; 30 S; 38 S; 39 S.

SECOND GROUP ($45.00 to $75.00 a year)

88 SINGLE ROOMS

$45.00	(13)	Edwards: 18 N; 19 N; 28 N; 29 N; 41 N; 42 N; 1 S; 18 S; 19 S; 28 S; 29 S; 32 S; 35 S.
47.00	(5)	Reunion: 1 N M; 2 N M; 1 S M; 2 S M; 3 S M.
50.00	(2)	Brown: "A" E; "B" W;
52.00	(10)	Edwards: 17 N; 20 N; 27 N; 30 N; 12 S; 15 S; 22 S; 25 S. West: 1 N; 2N.
53.00	(6)	Reunion: 13 N M; 14 N M; 15 N M; 13 S M; 14 S M; 15 S M.
55.00	(12)	Edwards: 16 N; 21 N; 26 N; 31 N; 36 N; 11 S; 16 S; 21 S; 26 S; 31 S; 36 S. West: 10 N.
56.00	(1)	Edwards: 11 N.
57.00	(1)	Hamilton: 2 A.
60.00	(4)	Brown: "C" E; "E" E; "D" W; "F" W.

63.00 (2) West: 1 S; 2 S.
65.00 (2) Witherspoon: 17 E. Cuyler: 461.
69.00 (14) Reunion: 4 N M; 5 N M; 6 N M; 7 N M; 8 N M; 9 N M; 10 N M; 4 S M; 5 S M; 6 S M; 7 S M; 8 S M; 9 S M; 10 S M.
70.00 (4) Edwards: 3 N; 4 N. Hamilton: 1 D; 1 E. Witherspoon: 17 W.
75.00 (12) Dod: 13 N; 13 S; 21 M; 22 M; 24 M; 25 M; 27 M. Edwards: 33 N; 34 N; 3 S; 4 S. Upper Pyne: 14.

4 Double Rooms

74.00 (4) Reunion: 1 N; 2 N; 1 S; 2 S.

THIRD GROUP ($76.00 to $110.00 a year)

121 Single Rooms

$80.00 (24) Brown: 1 E; 10 E; 1 W; 10 W; 1 S E; 10 S E; 1 S W; 10 S W. Dod: 1 N; 1 S; 1 M; 3 M; 4 M; 6 M. Edwards: 13 N; 14 N; 23 N; 24 N; 33 S; 34 S. Witherspoon: 18 E; 19 E; 18 W; 19 W.
84.00 (2) West: 17 N; 20 N;
85.00 (14) Blair: 61. Cuyler: 413. Edwards: 13 S; 14 S; 23 S; 24 S. Hamilton: 1 C; 2 C. Witherspoon: 1 E; 13 E; 1 W; 13 W; 8 E M; 8 W M.
90.00 (30) Brown: 4 E; 7 E; 4 W; 7 W; 4 S E; 7 S E; 4 S W; 7 S W. Cuyler: 442; 452. Dod: 5 N; 9 N; 5 S; 9 S; 8 M; 10 M; 11 M; 13 M; 14 M; 15 M; 17 M; 18 M; 20 M. Holder: 105; 106; 2 B. Little: 46. Witherspoon: 5 E; 9 E; 5 W; 9 W.
94.00 (4) West: 18 N; 19 N; 17 S; 20 S.
100.00 (2) Blair: 1; 63.
105.00 (24) West: 5 N; 6 N; 7 N; 8 N; 9 N; 11 N; 12 N; 13 N; 14 N; 15 N; 16 N; 6 S; 7 S; 10 S; 11 S; 14 S; 15 S. Witherspoon: 2 E; 3 E; 2 W; 3 W. Little: 18.
110.00 (17) Blair: 93. Cuyler: 144; 161; 244; 411; 412; 421; 431; 432; 441; 451; 462. Holder: 14 A. Little: 15; 32; 34; 44.

10 Double Rooms

84.00 (6) Reunion: 9 N; 10 N; 9 S; 10 S; 18 S; 19 S.
100.00 (4) Reunion: 11 N M; 12 N M; 11 S M; 12 S M.

FOURTH GROUP ($115.00 to $160 a year)

39 Single Rooms

$115.00 (5) West: 5 S; 8 S; 12 S; 13 S; 16 S;
125.00 (2) Upper Pyne: 12. Witherspoon: 20 E.
130.00 (13) Little: 16; Witherspoon: 6 E; 7 E; 10 E; 11 E; 14 E; 15 E; 6 W; 7 W; 10 W; 11 W; 14 W; 15 W.
135.00 (9) Blair: 94. Cuyler: 261; 262; 352; 362. Hamilton: 1 B; 2 B. Patton: 100; 109.
140.00 (3) Hamilton: 304; 305. Holder: 1 A.
150.00 (3) Upper Pyne: 3; 8; 13.
155.00 (1) Witherspoon: 20 W.
160.00 (3) Patton: 103; 105; 107.

20 Double Rooms

115.00 (10) Reunion: 3 N; 4 N; 5 N; 6 N; 8 N; 3 S; 4 S; 5 S; 6 S; 8 S.
130.00 (6) Witherspoon: 2 E M; 9 E M; 10 E M; 2 W M; 9 W M; 10 W M.
135.00 (1) Hamilton: 311.
140.00 (2) Witherspoon: 1 E M; 1 W M.
160.00 (1) Little: 101.

FIFTH GROUP ($165.00 to $200 a year)

45 Single Rooms

$165.00 (14) Blair: 113; 114. Campbell: 2 A. Little: 13; 14. Patton: 14; 15; 24; 25. Witherspoon: 4 E. Cuyler: 141; 142; 242; 361.
180.00 (7) Witherspoon: 8 E; 12 E; 16 E; 4 W; 8 W; 12 W; 16 W.
190.00 (5) Blair: 111; 112. Cuyler: 342. Little: 62. Patton: 101.
195.00 (19) Campbell: 11; 12; 13; 14; 21; 22; 23; 24; 53; 54; 55; 56; 61; 62; 63; 64; 65; 66; 1 A.
200.00 (4) Upper Pyne: 4; 9. Lower Pyne: 2; 8.

26 Double Rooms

180.00 (4) Campbell: 3 A; 5 A; 6 A; 2 B.
185.00 (6) Witherspoon: 5 E M; 6 E M; 7 E M; 5 W M; 6 W M; 7 W M.

190.00 (4) Witherspoon: 3 E M; 4 E M; 3 W M; 4 W M.
195.00 (4) Blair: 11; 31; 33; 41.
200.00 (9) Brown: 3 E; 6 E; 9 E; 12 E; 3 W; 6 W; 9 W; 12 W. Patton: 34.

SIXTH GROUP ($205.00 to $260.00 a year)

18 SINGLE ROOMS

210.00 (3) Blair: 3; 4; 5;
215.00 (6) Hamilton: 301. Little: 63; 124; 134; 144. Patton: 91.
220.00 (1) Hamilton: 3 C.
225.00 (4) Lower Pyne: 4; 10. Upper Pyne: 5; 10.
245.00 (4) Little: 151; 152; 163; 164.

104 DOUBLE ROOMS

210.00 (4) Dod: 14 N; 15 N; 14 S; 15 S.
220.00 (44) Blair: 21; 23; 34; 43; 44; 51; 52; 53; 54; 65; 71; 73; 81; 83; 91; 95; 97. Brown: 2 E; 5 E; 8 E; 11 E; 2 W; 5 W; 8 W; 11 W. Hamilton: 3 A. Holder: 11; 12; 3 A; 7 A; 3 B; 7 B; 2 D. Little: 31; 61. Patton: 30; 31; 32; 40; 41; 42; 43; 52; 53.
235.00 (3) Brown: 12 S E; 12 S W. Hamilton: 12.
250.00 (61) Blair: 13; 15; 17; 64; 72; 74; 84; 92; 98. Brown: 3 S E; 6 S E; 9 S E; 3 S W; 6 S W; 9 S W. Campbell: 4 A. Dod: 2 N; 3 N; 6 N; 7 N; 10 N; 11 N; 2 S; 3 S; 6 S; 7 S; 10 S; 11 S. Holder: 4 A; 5 A; 6 A; 9 A; 10 A; 11 A; 12 A; 13 A; 8 B; 8 C. Little: 21; 23; 35; 38; 41; 43; 51; 53; 54. Patton: 33; 35; 36; 102. Lower Pyne: 15. '79 Hall: 21; 23; 31; 33; 43; 51; 53; 61.
260.00 (5) Blair: 6. Brown: 11 S E; 11 S W. Dod: 23 M; 26 M.

SEVENTH GROUP ($265.00 to $325.00 a year)

1 SINGLE ROOM

$270.00 (1) Little: 186.

189 DOUBLE ROOMS

270.00 (2) Dod: 16 M; 19 M;
275.00 (87) Blair: 12; 14; 16; 22; 24; 32; 42; 62; 82; 96; 101;

102; 103. Brown: 2 S E; 5 S E; 8 S E. Cuyler: 143; 162; 211; 221; 222; 231; 241; 243; 251; 311; 321; 322; 331; 341; 343; 351. Dod: 2 M; 5 M; 9 M; 12 M. Holder: 21; 51; 113; 8 A; 2 C. Little: 22; 24; 33; 36; 42; 52; 121; 123; 131; 133; 141; 143; 171. Patton: 10; 11; 13; 20; 21; 22; 23; 50; 51; 60; 61; 62; 63; 70; 71; 72; 73; 81; 82; 83; 84; 85; 90; 92; 94; 108. '79 Hall: 41. Hamilton: 11; 16; 21; 309; 310; 312.

300.00 (59) Campbell: 25; 26; 27; 28. Hamilton: 14; 22; 24; 308. Little: 122; 132; 142. Holder: 22; 31; 32; 33; 34; 41; 42; 52; 53; 54; 61; 62; 71; 72; 75; 76; 84; 91; 93; 94; 111; 114; 121; 122; 123; 124; 131; 132; 133; 134; 141; 142; 143; 2 A. '79 Hall: 11; 13; 22; 24; 34; 44; 52; 62; 63. Lower Pyne: 1; 5; 7; 11. Upper Pyne: 11.

310.00 (2) Blair: 7; 9.

320.00 (2) Patton: 12. '79 Hall: 32.

325.00 (45) Blair: 104; 115; 116. Campbell: 15; 31; 32; 33; 34; 41; 51; 52. Cuyler: 212; 232; 263; 312; 332; 363. Hamilton: 300; 3 B. Holder: 43; 44; 63; 64; 73; 74; 81; 82; 92; 103; 104; 112. Little: 64; 71; 72; 161; 172; 181; 185. Patton: 80; 93; 95; 104; 106. '79 Hall: 42; 54.

EIGHTH GROUP ($330.00 a year and over)

28 Double Rooms

$350.00 (10) Little: 66; 68; 162. Campbell: 16. Lower Pyne: 3; 9. Upper Pyne: 1; 2; 6; 7.

355.00 (5) Campbell: 42; 44. '79 Hall: 12; 14; 64.

380.00 (6) Holder: 65; 66; 101; 102. Little: 182; 183.

405.00 (1) Little: 184.

420.00 (1) Blair: 2 (with privilege of a third occupant).

435.00 (1) Little: 153.

460.00 (1) Little: 154.

490.00 (1) Little: 111 (three occupants).

540.00 (1) Little: 112 (three occupants).

630.00 (1) Blair: "A" (three occupants).

THE UNIVERSITY DINING HALLS

Freshmen and sophomores are required to take their meals at the Dining Halls. Juniors and seniors who belong to upperclass clubs eat at those clubs, while non-club men eat either at the Dining Halls or at private boarding houses approved by the Secretary of Business Administration. The buildings contain five large dining rooms, two of which are assigned to freshmen, two to sophomores, and one to upperclassmen. There is no fixed seating arrangement and students are encouraged to eat at any table, in their respective rooms, at which they happen at any particular meal to find congenial friends. In addition to the dining rooms, each class has a commons or lounging room and a billiard room.

The Dining Halls are subject to constant sanitary inspection. The kitchen is fitted with all the best appliances for cooking and serving on a large scale, and adjoining are a bakery, an ice cream plant, a steam plant and a laundry. The Halls are in charge of a salaried manager who reports directly to the Secretary of Business Administration. The Manager is assisted by a Dining Halls Committee of fourteen undergraduates. The object of the Dining Halls is to provide wholesome and abundant food at the cheapest rate compatible with proper service, and amid hygienic and attractive surroundings. The fact that non-club upperclassmen are preferring to eat at the Dining Halls rather than make their own arrangements is believed to indicate that the board provided is better than can be obtained elsewhere. The price per week, beginning with the year 1917-1918, will be $7.00. Students who are unable to pay the full price of board are given employment as waiters at the

Dining Halls and thereby earn all or a part of the price of board. By waiting upon table for two meals each day, a student can earn his entire board. For the third meal, he sits at the table with his classmates. Students who wish to secure employment as waiters should communicate with the Secretary of the University or the Secretary of the Bureau of Self-Help.

UNIVERSITY BILLS

All university expenses, including board, must be paid in advance to the Treasurer of the University.

Students are required to call at the Treasurer's office in the course of the first ten days of each term, and to give information as to their place of boarding etc., so that their bills can be made out. All bills must be paid within the first four weeks of the term. Failure to comply with this rule will deprive the students of the privileges of the University until payment is made, unless excused by special vote of the Faculty.

When a student enters the University before the middle of the term, he shall pay in full the usual charges for that term, with the exception of the charges for board; if he enter after the middle of the term, he shall pay one-half. For board he shall pay in proportion to the time.

When a student leaves the University, whether voluntarily or by dismissal, before the middle of any term, one half of the charges for tuition and public rooms for that term will be refunded. But in the case of temporary absence and subsequent return, although the absence be for more than half a term, no such rebate will be granted.

When a student is dismissed from the University for any cause, the advance deposit for board, heat, and light, beyond the time of dismissal, will be refunded to his parent or guardian.

When at the end of the first term the amount of the advance deposit proves to be in excess of the sum required to defray the board or room bills of any student, the excess will be credited on his bill for the next term. At the end of the academic year the amounts overpaid by the members of the *graduating class* for board, room rent, heat, and light will be refunded by the Treasurer to the student's parent or guardian. The parent or guardian of *every undergraduate* will be advised of the amount of excess to the credit of his son or ward, and such amount will be *carried over to his credit on the bill for the first term of the following year.* In case of the withdrawal or dismissal from the University of any undergraduate at the end of the college year, such excess will be refunded by the Treasurer to the parent or guardian, when informed by the Dean of the College that such undergraduate has been withdrawn or dismissed from the University.

PRIZES

ALEXANDER GUTHRIE MC COSH PRIZE

The interest of $1,500 will be given annually to that member of the senior class who shall write the best essay in philosophy, including psychology, logic, metaphysics, and the history of philosophy. Any one of the following subjects may be chosen: The Meaning of Realism in Present-Day Philosophy and Present-Day Literature; The Place of Science in Thought; The Nature of Consciousness. The essay must be presented on or before April 8.

LYNDE DEBATE PRIZES

Three prizes, the income of $5,000 contributed by Charles R. Lynde, Esq., will be awarded by a committee appointed by the Faculty, to the three successful competitors in a debate held immediately prior to the trials for the appointment of intercollegiate debaters. The debaters are six in number, three from each of the Literary Societies, and are selected by committees appointed by the Societies respectively from their own members in the Faculty.

BAIRD PRIZES

Through the liberality of Charles O. Baird, Esq., the following prizes, representing the income of $6,000, will be given to those who excel in the oratorical exercises of the senior class, viz.: The Baird Prize of $100 to the best speaker of those who have ranked among the first six writers in any two of the three subjects of English literature, rhetoric, and oratory; a prize for oratory of $50 to the best speaker, exclusive of the Baird Prizeman, of those who, in the same departments, have ranked among

the first twelve writers; a prize for delivery of $30 to the best speaker exclusive of the two just mentioned; also, a prize for poetry of $50; and two prizes of $40 and $30, respectively, for the best and second best written disputations.

CLASS OF 1859 PRIZE

The interest of $2,000, given by the Class of 1859, will be awarded to that member of the senior class who shall write the best essay on Daniel Defoe, and pass the best examination on the Poetry of Tennyson. The essay must be handed in on or before May 31, and the examination will be held in June. The subject of the essay for the Class of 1919 will be British Poetry of the Great War.

GEORGE POTTS BIBLE PRIZES

The yearly interest of $1,000, given in 1867 by Mrs. Sarah A. Brown, expended in the purchase of two copies of Matthew Henry's *Commentary on the Bible,* will be presented to the two best Biblical scholars of the senior class at the end of their course.

LYMAN H. ATWATER PRIZE IN POLITICAL SCIENCE

This prize, being the annual interest on the sum of $1,000, contributed by the Class of 1883, was instituted as a memorial of the Rev. Lyman H. Atwater, D.D., LL.D., Professor of Political Science. It will be given to that member of the senior class who shall have passed the best examination and written the best thesis on some subject in political science, to be assigned by the professors in charge of Jurisprudence and Politics.

The thesis, which must be in scholarly form and legibly written, must be in the hands of the Chairman of the Department of History and Politics by June 1; the examina-

tion will be held on that day. The subject for the thesis in 1918 and the basis on which the examination is to be set will be: The advisability of changing the rules of Congress so as to enable the Administration to propose measures directly to Congress with power to participate in discussion of them.

FREDERICK BARNARD WHITE PRIZE IN ARCHITECTURE

The late Mrs. Norman White established in memory of her son, Frederick Barnard White, of the Class of 1883, a prize in architecture, yielding $40. The prize is open to the entire junior and senior classes and to special students who take a full schedule of studies. The subject of the essay for the year 1917-1918 is: The Dome in the Romanesque Architecture of France and Italy. The subject of the examination is Romanesque Architecture. The essay must be presented on or before May 15.

CLASS OF 1869 PRIZE IN ETHICS

The annual interest of $3,000, given by the Class of 1869, will be awarded to that member of the senior class who shall pass the best examination in ethics and write the best essay. The subject of the essay for the Class of 1918 may be either of the following: The Relation of Moral Value to Natural Impulse; The Ground of the Obligation of Patriotism. The essay must be presented on or before May 6.

C. O. JOLINE PRIZE IN AMERICAN POLITICAL HISTORY

The sum of $100 will be awarded annually at Commencement to that member of the graduating class who shall have maintained a creditable standing in the subject of American history, and who shall have submitted the best written dissertation. The subject of the dissertation for the year 1917-1918 is: The Movement for Re-organizing New Jer-

sey State Departments in the Interest of Economy and Efficiency.

The dissertation must be at least 5,000 words in length and must be accompanied by a bibliography of the subject. Specific references to the sources used must be given throughout.

The prize will be awarded by the professor or professors in charge of the Department of American History.

THE NEW YORK HERALD PRIZE

The yearly interest of $1,000, presented by James Gordon Bennett, Esq., will be given to that member of the senior class, or to the special student of satisfactory standing, who shall have taken for both terms of senior year at least two of the courses given by the Departments of History and Politics, and of Economics, and at least one course in English literature for both terms, and who shall have presented the best thesis in English prose upon some subject of contemporaneous interest in the domestic or foreign policy of the United States Government. The thesis, which must be in scholarly form and legibly written, must be in the hands of the Chairman of the Department of History and Politics by June 1. The subject for the thesis in 1918 will be: Current Projects of National Budget Reform.

CLASS OF 1876 MEMORIAL PRIZE FOR DEBATE IN POLITICAL SCIENCE

This prize is to be given annually by the Class of 1876 to the successful contestant in a debate on a subject of current interest in American politics, to be held on Washington's Birthday, said prize to be the interest of $2,000. The competitors, four in number, one from each class, are to be chosen by a vote of their respective classes.

PHILO SHERMAN BENNETT PRIZE IN POLITICAL SCIENCE

The interest of the sum of four hundred dollars, the gift of the late Philo Sherman Bennett, of New Haven, Connecticut, will be given to that member of the senior or junior class of the University who shall write the best essay discussing the principles of free government. The essay must be in the hands of the Chairman of the Department of History and Politics by June 1.

The subject for the year 1917-18 is: The Applicability to State Government of the Principles of the Commission Plan of Municipal Government.

*SPENCER TRASK DEBATING FUND

The interest of $3,000, given by the late Spencer Trask, Esq., of the Class of 1866, has been used to promote debating. One third of the interest has been awarded to the best debater in the trials for the intercollegiate debates with Yale and Harvard; one third for library books used in connection with debating; and one third for general debating expenses.

PRIZE IN AMERICAN HISTORY, ESTABLISHED BY THE SOCIETY OF COLONIAL WARS IN THE STATE OF NEW JERSEY

The sum of $50 will be awarded each year to that undergraduate of Princeton University who shall have submitted the best written dissertion upon some subject of American Colonial history assigned by the Department of American History.

The dissertation must be at least 5,000 words in length and must be accompanied by a bibliography of the sources used. Specific references to the sources must be given throughout.

Dissertations in competition must be in the hands of the

* There is at present no income from the Spencer Trask Debating Fund.

Registrar before May 1, and must be submitted anonymously. The names of the authors should be enclosed in sealed envelopes and attached to the dissertations.

The prize will be awarded by the Professor or Professors in charge of the Department of American History, and the decision will be announced at Commencement.

The subject for the year 1917-1918 is: New Jersey in the French and Indian Wars.

GARRETT PRIZE ON LATIN AMERICA

The sum of $100, the gift of John W. Garrett, Esq., of the Class of 1895, will be awarded annually, at Commencement, to that member of the Princeton undergraduate body who shall have submitted the best essay upon some subject connected with Latin America.

The essay must be at least five thousand words in length and must include a bibliography of the sources used. Specific references to the sources must also be given throughout.

The essays must be in the hands of the Chairman of the Department of History and Politics before June 1.

The subject for the essays of the year 1917-1918 will be: American Policy in San Domingo.

MANNERS PRIZES

The income from an endowment of $6,000, the bequest of the late Edwin Manners, Esq., of the Class of 1877, is to be devoted annually to the advancement of literary and historical studies.

One half of the income will be awarded annually at Commencement to that student of the Graduate School who shall have submitted the best monograph on the history of New Jersey. This monograph must be at least 25,000 words in length, and must be accompanied by a bibliography

of the subject discussed. Specific references to the sources used must be given throughout. The monograph must be in the hands of the Chairman of the Department of History and Politics by May 1. The recipient of the award shall be designated "The Nova Caesarea Scholar."

Of the other half of the income, a suitable portion shall be expended for a gold medal in the form of a tiger, and this medal with the balance of the money will be given annually at Commencement to that member of the senior class who shall write the best character study or descriptive sketch in prose or verse. The manuscripts must be in the hands of the Chairman of the Department of English by May 1. By direction of the donor the recipient of the award shall be designated "The Winner of the Golden Tiger."

LAURENCE HUTTON PRIZE IN HISTORY

The income from an endowment of $2,500, given by Samuel Elliott, Esq., as a memorial to his friend, the late Laurence Hutton, (Hon. A.M. 1897) will be awarded annually at Commencement to that student of the University adjudged by the Faculty to have excelled in the work of the Department of History. The prize is open alike to graduate and undergraduate students.

CHARLES IRA YOUNG MEMORIAL TABLET AND MEDAL

A memorial tablet to the late Charles Ira Young, of the Class of 1883, has been placed in the Palmer Laboratory by friends of Mr. Young.

In connection with this memorial, a bronze medal will be awarded each year to the student in the University who excels in research in Electrical Engineering, the medal to be known as the "Charles Ira Young Memorial Medal." The name of the winner of the medal is also to be inscribed each year upon the memorial tablet mentioned above.

CLASS OF 1870 SENIOR AND JUNIOR ENGLISH PRIZES

Of the yearly interest of $1,500, one half will be given to the best Old English scholar of the senior academic class, and one half to the best English literature scholar of the junior academic class.

WOOD LEGACY

The sum of $150, the income of a legacy of Dr. George B. Wood, will be awarded to that member of the junior class who shall stand highest for the junior year.

JUNIOR ORATOR MEDALS AND MACLEAN PRIZE

Four gold medals, or books of equal value, will be awarded by a committee, appointed by the Board of Trustees, to the four successful competitors in an oratorical contest during Commencement week. The competitors are eight members of the junior class—four from the Cliosophic and four from the American Whig Societies—selected by committees appointed by the Societies respectively from their own members in the Faculty.

The Maclean Prize, founded by the will of the late Henry A. Stinnecke, Esq., consisting of the sum of $100, will be given to that one of the orators chosen by the Literary Societies from the junior class who shall during Commencement week pronounce the best English oration.

The committee of judges will be composed of a professor of English and two graduates of the University not members of the Faculty.

DICKINSON PRIZE

The Dickinson Prize, founded in 1782 by the Hon. John Dickinson, of New Jersey, Governor of Pennsylvania and Delaware, consisting of a medal of the value of $60 (or its equivalent in money), will be awarded to that member of

the junior class who shall write the best dissertation upon any one of the following themes in logic: The Relation of Deduction and Induction; The Validity and the Practical Value of Syllogistic Logic; The Criterion of Truth. The dissertation must be presented on or before May 13.

THOMAS B. WANAMAKER ENGLISH LANGUAGE PRIZE

This prize, the yearly interest of $1,000, will be given to that member of the junior academic class who shall pass the best examination in English philology, and write the best thesis on some assigned topic therein.

MARY CUNNINGHAM HUMPHREYS JUNIOR GERMAN PRIZES

Two prizes, of $25 and $15 respectively, established by the late Professor Willard Humphreys, in memory of his mother, Mary Cunningham Humphreys, will be awarded to those members of the junior class who, having taken the regular German course for at least two years (all the courses in the Germanic Section of the Modern Language Department in junior year and either Courses 105, 106 or 203, 204) shall, at the close of the second term, pass the best examination on the work of the term.

R. PERCY ALDEN MEMORIAL PRIZES

The income of $1,000, given by John P. C. Alden, Esq., of the Class of 1907, and divided into a first and second prize, will be awarded annually to the two members of the junior French course who shall submit the best essays on a subject relating to French memoirs. The essays must be presented on or before May 15.

CLASS OF 1883 PRIZES FOR ENGLISH IN THE SCHOOL OF SCIENCE

Class of 1883 English Prize for Juniors in B.S. and Litt.B. Courses:—This prize, the annual interest of $1,000,

will be given to that member of the junior class, a candidate for the degree of B.S. or Litt.B., who shall have done the best work in the English studies of the year and submitted the best essay on a subject in English literature assigned by the English Department.

Class of 1883 English Prize for Freshmen in the Civil Engineering Course:—This prize, the annual interest of $1,000, will be given to that member of the freshman class, a candidate for the degree of Civil Engineer, who shall have done the best work in the English studies of the year, and shall have submitted the best essay on a subject assigned by the English Department.

STINNECKE PRIZE

The Stinnecke Foundation was established in 1870 by the will of the late Henry A. Stinnecke, of the Class of 1861, and was supplemented by a bequest received in 1876 from his aunt, Miss Maria Stinnecke. The income is divided between the Stinnecke Scholarship of $500 and the Maclean Prize of $100.

The Stinnecke Scholarship, of the annual value of $500, tenable during the undergraduate course unless forfeited by neglect of study, is given every third year "to that person who, having entered the sophomore class, passes the best examination at the opening of the session in September, in the Odes of Horace, the Eclogues of Virgil, and the Latin Grammar and Prosody, as well as the Anabasis or Cyropaedia of Xenophon and the Greek Grammar." Students of the University who have been members of the freshman class, as well as new students entering the sophomore class, will be admitted to such examination. The committee of examiners is appointed by the Board of Trustees. The next competition for this scholarship will be held in the autumn of 1920.

CLASS OF 1861 PRIZE

The interest of $1,200, given by the Class of 1861, will be awarded to that member of the sophomore class who shall pass the best examination at the end of the year on the elective mathematics of the sophomore year.

FRANCIS BIDDLE SOPHOMORE PRIZE

This prize, the yearly interest of $500, will be given to that member of the sophomore class who shall write the best English essay of the year.

CLASS OF 1870 SOPHOMORE ENGLISH PRIZE

This prize, the yearly interest of $1,000, will be given to that member of the sophomore academic class who shall pass the best examination on the English studies of the year.

ORANGE ALUMNI ASSOCIATION PRIZE SCHOLARSHIP

This scholarship, which pays the holder $200 per annum, the income from $4,000, given by the Princeton Alumni Association of the Oranges, will be awarded in accordance with the following conditions:

1. Only those are eligible to compete for this scholarship whose parents or family shall at the time of the competition have been resident for at least one year in the district of the Princeton Alumni Association of the Oranges. They shall present themselves for examination at the time of the entrance examinations in September, and shall take the *comprehensive examinations* in the four subjects required for admission under the Alternative Plan to a course leading to a bachelor's degree. These papers will not be read for the purpose of determining the winner until after the candidates have been in residence as regular members of the freshman class.

2. The Faculty shall name as winner of the scholarship that student who stands highest in this examination, and as alternate the student who stands next highest. This alternate may become the holder of the scholarship in case of the death or removal of the winner.

3. The scholarship shall be retained by its winner during his freshman and sophomore years, provided that in his studies he maintains a rank not below the second general group and that he does not come under serious discipline for misconduct.

The last competition for this scholarship was held in the autumn of 1917. The next competition will be held in the autumn of 1919. Candidates intending to compete for the scholarship in any year shall notify the Registrar of their intention not later than September tenth of that year.

THE PRINCETON CLUB OF PLAINFIELD ENTRANCE PRIZE

The Princeton Club of Plainfield, New Jersey, offers a prize of $50 annually to the resident of Plainfield or North Plainfield who enters the Princeton freshman class with the best examination record, provided he enters without conditions and remains a student in college in regular standing until the Christmas following his entrance.

THE BARNUM PRIZE ON FRANCO-AMERICAN RELATIONS

For the year 1917-1918 a prize of two hundred dollars ($200) is offered for the best study of Beaumarchais with especial reference to his connection with, and aid to, the American colonies in their struggle for independence. The contest is open to all undergraduates. The essays in competition must be handed to the Chairman of the Department of History and Political Science on or before May 31, 1918.

REMISSION OF TUITION

Candidates for the degree of Bachelor of Arts, Bachelor of Letters, or Bachelor of Science, of insufficient means and of good mental ability and serious purport may apply to the Secretary of the University for remission of tuition. This remission is in the form of a loan, the recipient being required to sign a non-interest-bearing note and to subscribe in the following conditions:

I. That he holds himself morally bound to pay this note in full at one time or by partial payments at the earliest date practicable.

II. That he will keep the University informed of his residence and occupation until this note is paid.

III. That he will give the University successive renewal notes when and as requested.

Remission of tuition and renewals are granted for one term and subject to the following conditions:

I. The recipient must be regular in attendance at his college exercises and free from serious discipline.

II. His class standing must not be below the third general group.

III. His board must not exceed six dollars and fifty cents a week; and his room, if single, must not be above the third group, as described on page 410 of the catalogue; nor, if double, above the fifth group, as described on page 411 of the catalogue. Students rooming elsewhere than in the dormitories must not pay more than three dollars and fifty cents a week for rent, including light and heat.

In accepting remission of tuition it is understood that a student agrees seriously to devote his best energies to his studies, and if his work shall appear to suffer by reason of participation in extra-curriculum activities, or if his scale

of living shall seem to be out of proportion to his means, he shall forfeit the remission of tuition even though he shall have complied technically with the rules.

Freshmen who have applied before the opening of college and whose testimonials as to scholarship, character and need are satisfactory, will be granted remission of seventy-five dollars from the charge for tuition for the first term, on admission to the University.

Freshmen whose applications are received after the opening of college and students entering from other colleges, whose testimonials are satisfactory, will be granted remission of fifty dollars from the charge for tuition for the first term.

Sophomores, juniors, and seniors who previously have not applied for remission of tuition but through changed conditions find themselves in need of financial assistance, may apply to the Secretary of the University, provided they have maintained a class standing not below the third general group and have complied with the other conditions.

At the opening of the second term freshmen and qualifying students who received remission of tuition and maintained a class standing in the first or second general group during the first term will be granted remission of one hundred dollars for the second term; those who maintained a class standing in the third general group will be granted remission of seventy-five dollars and, in special cases, those whose class standing was below the third general group may be granted remission of fifty dollars.

At the opening of each term sophomores, juniors, and seniors who have previously received remission of tuition, have maintained a class standing not below the third general group, and have fulfilled the other conditions, will, on application, be granted a renewal, varying in amount from

fifty to seventy-five dollars a term, in the discretion of the Secretary of the University.*

Within the first ten days of each term and before their bills are made out, *applicants for remission of tuition or renewals are required to call at the office of the Secretary of the University* for the necessary order on the Treasurer.

The Secretary of the University is authorized, in his discretion, to remit the full charge for tuition in special cases. This will be done only after a personal interview with the applicant.

For application blanks, apply to the Secretary of the University, Princeton, New Jersey.

---

* Students who have previously held remission of tuition and have maintained a class standing in the first or second general group are eligible for University Scholarships. For information see page 420.

SCHOLARSHIPS

SCHOLARSHIPS FOUNDED BETWEEN 1853 AND 1902

(Income now used for University Scholarships)

In 1853 the Trustees authorized the Faculty to take such measures as might seem to them necessary towards securing a number of scholarships with a principal of one thousand dollars each. Pursuant to this authorization, between 1853 and 1902 sixty-four scholarships with a principal of one thousand dollars each were endowed by John Aitken, E. F. Backus, A. B. Baylis, Charles S. Baylis, James Blair, Isaac V. Brokaw, Mrs. P. Bullard, Hons. Simon and Donald Cameron (1), Aaron Carter, Jonathan Cogswell, D.D., Roswell Colt (3), Stephen Colwell, A. Creswell, Hon. Amzi Dodd (the Bloomfield Scholarship), Aaron Fenton, A Friend, A Friend (the Henry M. Alexander Scholarship), A Friend of President Maclean (the John Maclean Scholarship), Friends of President McCosh (the James McCosh Scholarship), Hon. Henry W. Green, Dudley S. Gregory, Richard T. Haines, Gen. N. Norris Halsted, Albert O. Headley, Dr. Hugh L. Hodge, Capt. Silas Holmes (5), Hon. John P. Jackson, Peter Jacobus, Jacob J. Janeway, D.D., Ladies of the Presbyterian Church of Huntington, N. Y., James Lenox (5), Drs. John and George M. Maclean (1), J. D. McCord, Frederick Marquand, Members of the Class of 1841, Members of the Class of 1856, Members of the First Presbyterian Church of Bridgeton, N. J., Members of the First Presbyterian Church of Peekskill, N. Y., Members of the First Presbyterian Church of Trenton, N. J., Members of the Second Presbyterian Church of Elizabeth, N. J., George W. Musgrave, D.D., Matthew Newkirk, Dr. Samuel H. Pennington, Hon. Nehemiah Perry, Isaac N.

Rankin, Harry E. Richards, M.D., George L. Sampson (the Henry J. van Dyke Scholarship), Joseph R. Skidmore, I. S. Spencer, Alanson Trask, Joseph N. Tuttle, Hon. John Van Vorst, William White, and Chandler Withington; and one scholarship with a principal of one thousand five hundred dollars was endowed by Henry M. Flagler.

During the same period twenty-one memorial scholarships with a principal of one thousand dollars each were endowed as follows:

The Cyrenius Beers Scholarship by Miss Julia Beers, the J. S. Bonsall Scholarship by a bequest of Mrs. Susan R. Bonsall, the Albert Dod Brown Scholarship by Mrs. Susan D. Brown, the Grace Newcombe Denning Scholarship by Mrs. William Moir ($1,500), the Finley and Breese Scholarships by a bequest of Samuel F. B. Morse, the Elizabeth Musgrave Giger Scholarship by Prof. George M. Giger, D.D., the Charles Dickinson Hamill Scholarship by Samuel M. Hamill, D.D., the Matthew B. Hope Scholarship by the Trustees of the College of New Jersey as an acknowledgment of the services of Professor Hope in raising an endowment of over one hundred thousand dollars, the Jeremiah D. Lalor Scholarship by a friend, the Harvey Lindsley Scholarship by Mrs. Emeline Coney Lindsley, the John C. D. Matthews Scholarship by Mrs. Mary R. Matthews, the Newark Scholarship by the will of Henry Rogers, the Ezra Nye Scholarship by F. Wolcott Jackson, the John Joseph Rankin Scholarship by William Rankin, the Laurance Field Stevens Scholarship by Herbert B. Stevens, the Nathaniel W. Townsend Scholarship by Mrs. Daniel Haines, the William Campbell Truesdell Scholarship by Warren N. Truesdell, the Van Sinderen Scholarship by Mrs. and Miss Van Sinderen, the Robert Voorhees Scholarship by Mrs. Susan V. Clark, and the Gertrude N. Woodhull Scholarship by Dr. John N. Woodhull.

In 1913 a bequest of one thousand dollars was received from the Estate of Mrs. Mary Hale Chamberlain to endow the Hale Scholarship in memory of Titus Hale and Mary H. Hale, his wife.

UNIVERSITY SCHOLARSHIPS

From the income derived from scholarships founded prior to 1903 forty University Scholarships have been established: ten "A" Scholarships of the annual value of two hundred dollars each, and thirty "B" Scholarships of the annual value of one hundred and seventy-five dollars each. During the summer these scholarships will be awarded for the first term to members of the senior, junior, and sophomore classes who are candidates for the degree of Bachelor of Arts, Bachelor of Letters, or Bachelor of Science, and who have previously received remission of tuition, in accordance with the following rules:

(*a*) The ten "A" scholarships will be awarded to those students whose standing during the previous year was in the first general group. If more than ten students are eligible, award will be made according to seniority of class.

(*b*) The thirty "B" scholarships will be awarded to those students whose standing during the previous year was in the second general group. If more than thirty students are eligible, award will be made according to seniority of class, except that students eligible for "A" scholarships shall take preference over all others.

University Scholarships are awarded in all cases for one term and subject to the following conditions:

I. The holder must be regular in attendance at his college exercises and free from serious discipline.

II. His general group, as shown by his latest semi-annual report, must not be below that in which he stood when the scholarship was awarded to him.

III. His college bill for one term for board, room rent, light, and heat must not exceed two hundred dollars.

A University Scholar who has fulfilled these conditions during the first term of a college year will receive the scholarship for the second term of that year without further action on his part.

ENDOWED SCHOLARSHIPS

The endowed scholarships described in the following list may be assigned to students in any undergraduate department of the University unless restricted by the donor to some particular department or departments. The annual stipend of each scholarship at present is one hundred and twenty-five dollars unless another amount is stated. It is customary to assign these scholarships, when they become vacant, to undergraduates who have been members of the University for at least one year, and who are considered most worthy to receive the benefit.

Application for endowed scholarships should be made to the Secretary of the University, Princeton, New Jersey.

THE ELIZABETH VAN CLEVE SCHOLARSHIP: Founded in 1886, by a gift of two thousand dollars, from Hon. Caleb S. Green, of Trenton, N. J., of the Class of 1837. In 1912 the principal was increased to two thousand five hundred dollars by William E. Green, Esq., of the Class of 1902.

The scholarship is ordinarily assigned to a student in the John C. Green School of Science.

THE WISTAR MORRIS WOOD AND CHARLES MORRIS WOOD SCHOLARSHIP: Founded in 1887, by a gift of two thousand dollars from the Rev. Charles Wood, D.D., of Washington, D.C. In 1908 the principal was increased by two thousand

five hundred dollars by the donor. The annual stipend is one hundred dollars.

This fund shall ordinarily in the first instance be given to a member of the junior class, or in case no member of the junior class answers the conditions, then to any member of the lower classes answering them. Conditions: I. To any foreign missionary's son intending himself to become a foreign missionary; II. To any student proposing to labor in the foreign field; III. To any minister's son studying for the ministry. It shall be understood that the recipient of the fund must possess and keep up superior scholarship.

THE RACHEL LENOX KENNEDY SCHOLARSHIP FUND; with an income of six hundred dollars: Established in 1888 by Miss Rachel Lenox Kennedy, of New York, with a principal of five thousand dollars and increased by the donor in 1890 by a further gift of ten thousand dollars. The income from this fund is used to aid meritorious undergraduates in any department of the University who have maintained high standing in their classes.

THE BUTLER SCHOLARSHIP; with an endowment of two thousand five hundred dollars: Founded in 1892 by William Allen Butler, Jr., of New York, of the Class of 1876, with a gift of one thousand dollars, which has since been increased to two thousand five hundred dollars.

THE MCCORMICK SCHOLARSHIP; a gift of two thousand dollars: Founded in 1894 by Mrs. Cyrus Hall McCormick, of Chicago. The annual stipend is one hundred dollars.

THE WALLACE SCHOLARSHIPS; (two with an income of one hundred and twenty-five dollars each): In 1898 Mrs. R. H. Allen and Miss Wallace, of Newark, N. J., gave five

thousand dollars to found two scholarships in memory of their father, William C. Wallace, of the Class of 1823, for the benefit of needy students.

THE JOHN LINN PATTON SCHOLARSHIP: Founded in 1903, with a principal of two thousand five hundred dollars, by Mr. and Mrs. William A. Patton, of Philadelphia, in memory of their son, John Linn Patton, of the Class of 1903.

THE MAHLON LONG SCHOLARSHIP: Founded in 1904 by Rev. George Wells Ely, of Columbia, Lancaster County, Pa., by a gift of one thousand two hundred and fifty dollars and real estate in Minneapolis, Minn., and Jersey City, N. J., valued at eight thousand seven hundred and fifty dollars.

This scholarship is open to undergraduates, members of either the Academic or Scientific Department, and is intended to be given during the entire course to the same student, although appointments or reappointments may be changed by the person having the power, in his discretion. The donor may, during his life, designate the beneficiary, but in case he should not do so on or before October first of each year, then the President of the University shall designate the beneficiary, selecting a regularly matriculated candidate for a degree, who, in his judgment, is a young man of limited means, of worthy character and capacity and who gives promise of a useful life. The net income from this scholarship will be used by the beneficiary for tuition and other necessary expenses but no more than four hundred dollars shall be paid to any one beneficiary annually; whatever excess income there may be to accrue to the benefit of the fund. The annual stipend is at present three hundred and fifty dollars.

THE JOHN H. CONVERSE AND JOHN W. CONVERSE SCHOLARSHIPS (two, with an income of one hundred and twenty-five dollars each): Founded in 1904 by the late John H. Converse, with a principal of five thousand dollars. The privileges of these scholarships are to be extended by the Faculty to students looking forward to a seminary course and the Christian ministry, the Presbyterian ministry preferred.

THE ROBERT STOCKTON PYNE SCHOLARSHIP: Founded in 1904, with a principal of two thousand five hundred dollars, by Mrs. M. Taylor Pyne, of Princeton, in memory of her son, Robert Stockton Pyne. The annual stipend is one hundred dollars.

THE FREDERICK WOLCOTT JACKSON SCHOLARSHIP: Founded in 1905, by a gift of two thousand five hundred dollars from Philip N. Jackson, of Newark, N. J., of the Class of 1881.

THE ANDREW WHITE GREEN SCHOLARSHIP; with an income of two hundred and fifty dollars: Founded in 1905, with a principal of five thousand dollars, by the late Cornelius C. Cuyler, of the Class of 1879, as executor and sole legatee of Andrew White Green. The income is to be used in aiding some needy and deserving student each year through his college course; the student to be designated by the President or Dean.

THE HENRY S. GANSEVOORT SCHOLARSHIP: Founded in 1906, with a principal of two thousand five hundred dollars, by Mrs. Abraham Lansing, of Albany, N. Y., in memory of her brother, Henry S. Gansevoort.

THE CLASS OF 1878 SCHOLARSHIPS: Dr. John S. Sayre, of the Class of 1878, who died in 1899, made Princeton University his residuary legatee. After creating the Fellowship of Applied Chemistry and the Fellowship of Applied Electricity, the will directs "the balance of my estate, if any, to be used for as many as possible endowed scholarships in the Academic (Classical) Department of the University which are to be known as the Class of 1878 Scholarships." At present there are five scholarships of one hundred and forty-five dollars each under this endowment.

THE GEORGE BLACK REA SCHOLARSHIP; with a principal of two thousand five hundred dollars: Founded in 1908 by Mr. and Mrs. Samuel Rea, of Bryn Mawr, Pa., in memory of their son, George Black Rea, of the Class of 1904. Preference to be given to a student of the Department of Civil Engineering.

THE ALGERNON BROOKE ROBERTS SCHOLARSHIP, CLASS OF 1896: Founded with the principal of twenty-five hundred dollars in accordance with a bequest to his mother, 1909.

THE DR. ANDREW J. MCCOSH MEMORIAL SCHOLARSHIPS: Founded in 1909 with the principal of ten thousand dollars by the late Mrs. Alexander Maitland in memory of her brother, Andrew J. McCosh, M.D., of the Class of 1877. Preference is given to students in the senior and junior classes. At present there are two scholarships of one hundred and twenty-five dollars each and two scholarships of one hundred and twenty dollars each under this endowment.

THE JOHN WITHERSPOON SCHOLARSHIP; with an income of one hundred and sixty dollars: Founded in 1909 by the

Trustees of the Witherspoon Memorial Association with a gift of four thousand dollars, the unexpended balance of a fund contributed by patriotic citizens for the purpose of erecting a statue in Washington, D. C., to John Witherspoon.

THE S. STANHOPE ORRIS FUND: Professor S. Stanhope Orris, who died in 1905, bequeathed to Princeton University "the sum of Twenty-five Thousand Dollars ($25,000) as a fund, the annual income of which will be divided equally among ten needy academic students of good character and ability, of diligence in study, and exemplary behavior. No candidate for the ministry, however, though needy, studious and possessing ability, shall receive help from this fund unless he pledge himself to continue and do continue the study of Greek regularly to the end of the university course." There are ten scholarships of one hundred and twenty dollars each.

THE SUSAN BREESE PACKARD MEMORIAL SCHOLARSHIP AND THE FRANCIS APPLETON PACKARD MEMORIAL SCHOLARSHIP, founded by a bequest of five thousand dollars under the will of Professor William A. Packard, who died in 1909. "The income of these scholarships to be devoted to paying the tuition fees of students in Princeton University pursuing courses of study of which the Greek and Latin languages and literature shall constitute a substantial part. Students of approved scholarship and character who need this aid, and such only, shall be eligible to receive the same."

THE THOMAS AND LUCY KAYE MEMORIAL SCHOLARSHIPS; two, with an income of ninety dollars each; Founded in 1911 by a bequest of five thousand dollars under the will of John William Kaye, of the Class of 1874.

THE WILLIAM ROME GELSTON SCHOLARSHIP; with an income of two hundred and twenty-five dollars: Founded in 1912 with a gift of $5,000 in memory of William R. Gelston, deceased, of the Class of 1901, "the net annual income thereof to be given in each year to such student in the Academic Department of Princeton University regularly matriculated for a degree, as the President of the University shall consider to be a person of capacity and worthy character, who gives promise of a useful life and is of limited means, such appointee to be designated by said President, and such income shall be used by such appointee, first in the payment of his tuition fees, and the balance shall be used by him in payment of his board and other necessary university expenses."

THE JOHN REID CHRISTIE, JR., SCHOLARSHIP: Endowed in 1913 with the principal of twenty-five hundred dollars, received from the estate of John Reid Christie, Jr., of the Class of 1913, who died during the summer of 1913. The annual stipend is one hundred dollars.

THE NOEL BASSETT SCHOLARSHIP: Founded in 1915 with a gift of twenty-five hundred dollars, by friends of the late Noel Bassett, of the Class of 1911. By the deed of gift, the right to recommend the removal of the incumbent of this scholarship rests with the committee representing the donors, until 1940. The annual stipend is one hundred dollars.

THE PRINCETON CLUB OF CHICAGO UNDERGRADUATE SCHOLARSHIP: Endowed by the Princeton Club of Chicago and open to men in Chicago and upper Illinois. The fund available is six hundred dollars a year for the four years of the undergraduate course, the holder being permitted to

draw on the amount annually as his needs may require with the understanding that he will sign notes payable at his convenience after completing his course. Awards are made by a committee of the Princeton Club of Chicago.

THE ROCKY MOUNTAIN PRINCETON CLUB SCHOLARSHIP; with a stipend of two hundred and fifty dollars a year: Awarded for the freshman year to the winner of a competition open to students entering from the high schools in the city and county of Denver or other accredited high schools of the territory covered by the Rocky Mountain Princeton Club. The competition is held and the award is made by the Scholarship Committee of the Rocky Mountain Princeton Club, Denver, Colo.

THE NEW ENGLAND SCHOLARSHIPS: Offered each year by the Princeton Alumni Association of New England to residents of New England.

These scholarships, eight in number, are awarded on the Rhodes Scholarship plan. Four of them carry a payment of $500 a year for four years, and four a payment of $250 a year for four years.

To be eligible a candidate must have passed the College Entrance Board Examinations and must then appear before the Committee of Selection, composed of the President and Treasurer of the Princeton Alumni Association of New England, and a representative of the Graduate Council of Princeton University.

Applications should be made to John S. Nicholl, Esq., Secretary of the Princeton Alumni Association of New England, 491 Main Street, Cambridge, Mass.

THE MAINE SCHOLARSHIP: Offered anonymously each year, on the Rhodes Scholarship plan, through the Princeton Alumni Association of New England, to candidates

from Maine, and paying $500 a year for four years. The eligibility rules are those of the New England Scholarships.

Applications should be made to John S. Nicholl, Esq., Secretary of the Princeton Alumni Association of New England, 491 Main St., Cambridge, Mass.

PRINCETON ALUMNI ASSOCIATION OF WESTERN PENNSYLVANIA SCHOLARSHIPS: Beginning with the year 1917-1918, ten or more Scholarships, each paying $250 per year for four years, will be open to members of the graduating class in accredited high and private schools within the territory covered by the Association, which in general embraces Western Pennsylvania, Eastern Ohio and West Virginia. All awards are made on a competitive basis, after full investigation by the Scholarship Committee of the Association. Further investigation may be obtained from the Secretary, Frederick H. Atwood, Esq., 1323 Farmers Bank Building, Pittsburgh, Pa.

ENDOWMENT AND ADMINISTRATION OF SCHOLARSHIPS

The following rules for the endowment and administration of scholarships have been adopted by the Trustees:

I. A scholarship available in any undergraduate department may be endowed by the payment to the Treasurer of a sum of not less than twenty-five hundred dollars. Unless otherwise specified by the donor, the endowment of a scholarship will be invested with the general funds of the University and the incumbent will receive as an annual stipend the income of the endowment at the prevailing rate of interest.

II. The right to nominate the incumbent of a scholarship shall rest with the donor, if an individual, during his or her lifetime, or if an institution or alumni association,

for a period of twenty-five years. At the end of this period or at the death of the donor, the right of nomination shall revert and rest with the Faculty of the University.

III. All scholarships shall be held subject to such rules as may be adopted from time to time by the Faculty of the University.

FUNDS FOR CANDIDATES FOR THE MINISTRY

THE RICHARDS FUND: A bequest of Mrs. Esther Richards, of New York, amounting to $2,970.32, for the benefit of candidates for the ministry. Received in 1790.

THE LESLIE FUND: A bequest of James Leslie, of New York, of the Class of 1759, amounting to $10,677.49, for "the education of poor and pious youths with a view to the ministry of the Gospel in the Presbyterian Church." Received in 1792.

THE HODGE FUND: A bequest of Hugh Hodge, of Philadelphia, of a house and lot on Market Street, above Second (No. 205) "to be held by the Trustees in trust, to lease out from time to time, and the rents to be applied to the support and education of pious youths for the ministry." Received in 1805.

For application blanks for aid from the funds for candidates for the ministry apply to the Secretary of the University, Princeton, New Jersey.

CHARITABLE FUNDS

THE VAN ARSDALE FUND: A bequest of Robert Van Arsdale, of Newark, N. J., of the Class of 1826, amounting to $3,000, "in trust for promoting charitable instruction in the College of New Jersey, according to the discretion of the Faculty." Received in 1875.

Applications for aid from the Van Arsdale Fund should be made to Professor Howard McClenahan, Dean of the College.

BUREAU OF STUDENT SELF-HELP

The Bureau of Student Self-Help is managed under the direction of the Secretary of the University, for the purpose of providing opportunities for remunerative employment to students who must earn part of their college expenses. All students who are obliged to earn money during their college course are advised to register with this Bureau.

Further information may be obtained from Mr. George McF. Galt, Secretary of the Bureau of Student Self-Help, 32 Mercer St., Princeton, N. J.

PART X

DEGREES AND HONORS, 1916-1917

DEGREES CONFERRED, 1916-1917

DEGREES IN COURSE CONFERRED OCTOBER 26, 1916

A.M.—Fred Lee Harper, A.B., *Muskingum College,* 1912.

M.S.—Harry Hamilton Laughlin, B.S.D., *North Missouri State Normal School,* 1910; B.S., *North Missouri State Normal School,* 1910.

Litt.B.—John Eichler Heintz, as of the Class of 1916.

DEGREES IN COURSE CONFERRED JANUARY 11, 1917

Ph.D.—Thomas King Whipple, A.B., *Princeton University,* 1913. Subject, English. Thesis, "Martial and the English Epigram: Wyatt to Johnson."

Louis Max Hickernell, A.B., *Allegheny College,* 1910. A.M., Princeton University, 1914. Subject, Biology. Thesis, "A Study of Dessication in the Rotifer Philodiva Roseola, with especial reference to Cytological Changes accompanying Dessication."

A.B.—Warren Smith Norton, as of the Class of 1915.

Litt.B.—Robert Houston MacCready, Jr., as of the Class of 1916.

DEGREES IN COURSE CONFERRED APRIL 12, 1917

Ph.D.—Henry Van Wesep, A.B., *University of Michigan,* 1912; A.M., *Princeton University,* 1913. Subject, Philosophy. Thesis, "Gorgias of Leontini, a Review and an Interpretation."

Frank Meyers Seibert, B. S., *Pennsylvania State College,* 1910. Subject, Chemistry. Thesis "Standard Cells and the Nernst Heat Theorem."

William Edwin Hoy, Jr., A.B., *Franklin and Marshall College,* 1911. Subject, Biology. Thesis, "A Comparative Study of Somatic Chromosomes."

A.M.—Louis Van Valzah Barber, A.B., *Park College,* 1913.

A.B.—Webster LeRoy Edgar, as of the Class of 1916.

William Esher Heyl, Jr., as of the Class of 1916.

David Scott Hirschberg, as of the Class of 1916.

Litt.B.—Laird Howard Barber, Jr., as of the Class of 1916.
William Hamnet Beatty, as of the Class of 1916.
Robert Granger Benson, as of the Class of 1916.
Elmer Ellsworth Childs, as of the Class of 1916.
Wyllys Dixon, as of the Class of 1916.
Henry Lawrence Grinnell, as of the Class of 1916.
Shih Cheng Hsu, as of the Class of 1916.
Ferdinand John Kruse, as of the Class of 1916.
Robert Lincoln McKinney, as of the Class of 1916.
Frank Morse Shanbacker, as of the Class of 1916.
David Durell Stueck, as of the Class of 1916.
Harrison McClure Thomas, as of the Class of 1916.
Eugene Franklin Summers, as of the Class of 1916.
B.S.—William Macdonough Agar, as of the Class of 1916.
C.E.—O'Hara Denny Brereton, as of the Class of 1916.
George Gillespie, as of the Class of 1916.

HONORARY DEGREES CONFERRED JUNE 16, 1917.

A.M.—Captain Stuart Heintzelman
D.Sc.—Charles Horace Mayo
Theobald Smith
LL.D.—Frank Johnson Goodnow
Sir Robert Alexander Falconer
George Ellery Hale
Herbert Clark Hoover
Robert Lansing
Viscount de Alte
Emile de Cartier de Marchienne
Aimaro Sato
Viscount Vincenzo Macchi di Cellere
Sir Cecil Arthur Spring-Rice
Jean Adrien Antoine Jules Jusserand

DEGREES IN COURSE CONFERRED JUNE 16, 1917

DOCTOR OF PHILOSOPHY (*Ph.D.*).....5

Charles William Hendel, Jr., Litt.B., *Princeton University,* 1913. Subject, Philosophy. Thesis, "Introductory Essay to Henne's Dialogues Concerning Natural Religion."

Frederick Henry Martin, A. B., *Bates College,* 1910; A.M., *Princeton University,* 1915. Subject, Chemistry. Thesis, "The Occlusion of Hydrogen by a Palladium Cathode."

Gilbert Stuart Robertson, A.B., *Princeton University,* 1912; A.M., *Princeton University,* 1913. Subject, English. Thesis, "The Point of Attack in Elizabethan Drama.

Shirley Howard Weber, A.B., *University of California,* 1907; A.M., *University of California,* 1914. Subject, Classics. Thesis, "A Philological Commentary on Anthimus, *de observatione ciborum.*"

Ralph Bailey Yewdale, A.B., *University of Wisconsin,* 1914; A.M., *University of Wisconsin,* 1915. Subject, History. Thesis, "Bohemond I, Prince of Antioch."

DOCTOR OF SCIENCE (*Sc.D.*).....1

William Miller Bovard, B.S., *University of Pennsylvania,* 1913; M.S., *Princeton University,* 1915. Subject, Chemistry. Thesis, "Inclusions in Silver Deposits and the Electrochemical Equivalents of Silver."

MASTER OF ARTS (*A.M.*) on EXAMINATION.....59

Ethan Davidson Alyea, A.B., *Princeton University,* 1916.
Louis van Valzah Barber, A.B., *Park College,* 1913.
Randolph Hunter Barksdale, A.B., *Hampden Sidney College,* 1912.
Bascom Weaver Barnard, A.B., *Trinity College,* 1915.
Francis Wesley Blair, B.S., *Amherst College,* 1915.
Clarence Dietz Brenner, A.B., *Princeton University,* 1915.
Frederick Warner Brown, Ph.B., *Heidelberg University* (Ohio), 1914.
Laurence Ladd Buermeyer, A.B., *University of Pennsylvania,* 1912.
James Cannon, III, A.B., *Trinity College,* 1914.
John Franklin Bruce Carruthers, A.B., *Princeton University,* 1912.
Kenneth Frank Cramer, Litt.B., *Princeton University,* 1916.
Earnest Edward Eells, A.B., *Clark College,* 1914.
Harold Allen Elson, B.S, *Ohio University,* 1912.
Albert Mathias Friend, Jr., Litt.B., *Princeton University,* 1915.
Hugh Stuart Fullerton, A.B., *Wittenberg College,* 1914.
George Baer Fundenburg, A.B., *Princeton University,* 1916.
Henry Edwin Gebhard, A.B., *Ursinus College,* 1914.
Anthony Pastor Giraud, B.S., *University of Seville* (Spain), 1908.
James Sproat Green, Jr., A.B., *Princeton University,* 1916.
William Thomson Hanzsche, A.B., *Washington and Lee University,* 1913.

Earle Atherton Harding, B.S., *Bates College,* 1915.
Horace Egbert Haring, B.S., *Franklin and Marshall College,* 1916.
Edson Burr Heck, B.S., *Princeton University,* 1912.
Richard Miner Hewitt, A.B., *Wesleyan University,* 1914.
Charles Paddock Johnson, A.B., *Trinity College,* 1916.
Robert Malcus Johnston, A.B., *Trinity College,* 1916.
Raymond Anthony Ketchledge, A.B., *Lafayette College,* 1914.
George Harold Kinard, Ph.B., *Franklin and Marshall College,* 1911.
James Neville Land, A.B., *Daniel Baker College,* 1915.
Willard Bostwick Marsh, A.B., *Hamilton College,* 1912.
Oliver Parker McComas, Jr., A.B., *Princeton Unversity,* 1916.
John Davidson McLanahan, A.B., *Princeton University,* 1916.
Joseph McNeill, A.B., *Haverford College,* 1915.
Lewis Philip Ohliger, B.S., *Princeton University,* 1916.
Howard Lower Olewiler, A.B., *Lebanon Valley College,* 1914.
Herbert Towle Perrin, Ph.B., *Kenyon College,* 1916.
Joseph Hyram Roe, A.B., *Roanoke College,* 1916.
Lindsley West Ross, A.B., *Reed College,* 1915.
F. Rolland Severance, Litt.B., *Princeton University,* 1915.
Irvin Sturger Shultz, A.B., *Grove City College,* 1913.
Gordon Gowans Sikes, A.B., *Princeton University,* 1916.
Charles Newton Sisson, A.B., *Roanoke College,* 1916.
Charles Phelps Smyth, A.B., *Princeton University,* 1916.
Daniel Lester Snyder, A.B., *Randolph Macon College,* 1915.
John Barker Stearns, A. B., *Dartmouth College,* 1916.
William Frederick Stohlman, A.B., *Princeton University,* 1909.
Frank Stacy Tavenner, Jr., A.B., *Roanoke College,* 1916.
Harry Morgan Taxis, A.B., *Pennsylvania College,* 1911.
Merwyn Clarence Teague, A.B., *Wabash College,* 1914.
Paul DeWitt Twinem, A.B., *College of Wooster,* 1915.
Simon Ercile Twining, Ph.B., *University of Notre Dame,* 1913.
Domenico Vittorini, Litt.D., *University of Rome,* 1916.
Chenghsu Henry Wang, A.B., *Yale University,* 1916.
Reuben Axel Wester, A.B., *William Jewell College,* 1912.
James Wellington Whaler, A.B., *Princeton University,* 1911.
Cameron Whiteford, A.B., *Amherst College,* 1914.
John Allan Wyeth, Jr., A.B., *Princeton University,* 1915.
John Howe Yoe, B.S., *Vanderbilt University,* 1913.
Stewart Ehr-Shuin Yui, A.B., *Boone University* (China), 1911.

MASTER OF SCIENCE (*M.S.*) ON EXAMINATION.....3

Raymond Henry Fogler, B.S., *University of Maine,* 1915.
Robert Francis LaBarron, B.S., *Union College,* 1913.
Russell Vreeland Tuers, B.S., *New York University,* 1915.

ELECTRICAL ENGINEER (*E.E.*).....5

George Edward Luke, B.S., *University of Missouri,* 1916.
Brunson Simpson McCutchen, Litt.B., *Princeton University,* 1915.
August John Mundt, B.S., *Princeton University,* 1915.
Walter van Braam Roberts, B.S., *Princeton University,* 1915.
Dudley Willcox, A.B., *Yale University,* 1908.

BACHELOR OF ARTS (*A.B.*).....94

David Muir **Amacker**
Knowlton Lyman Ames, Jr.
Carl Franklin **Arnold**
Maximilian Justus Averbeck, Jr.
Charles Alfred **Bahrenburg**
Alvin **Behrer**
William Thompson **Black**
Walter Melville **Boadway**
Charles Edward Brown, Jr.
Raymond Ernest Brubaker
Harrison **Bullock**
Samuel McClellan Butt
Truman David Cameron
Horace Tarr Cator
Robert Armstrong Cochran, III
Samuel Harriot Compton
Palmer Henry Cook
William Prentice Cooper, Jr.
William Miller Cotton
Robert Leighton Crawford, III
Modestino Criscitiello, Jr.
Kenneth Mosier Day
Frank Julius Deitsch
Douglas DeLanoy
Gilbert Curtis Demorest
Paul Browning Dickey
Milton Sands Dillon
Rudolf Eberstadt
Malcolm Shepherd Edgar
Marshall Lowndes Edgar
Stacy Guild Fine
Ernst Hermann Forster
John Miley Foster
Ludlow Sebring Fowler
Alfred Gottlieb Gennert
James Emmet Gowen
William Edwin Guy
Crowell Hadden, III
Edward Harris, II
Stanley Edwards Harris
Walter Butler Harris, Jr.
Robert Purviance Hazlehurst
Robert Elwood Heimbach
Paul William Hills
Leslie Cressman Hiltebeitel
Henry Leonard Hilton-Green
Harold Boies Hoskins
Charles Edwin Kennedy
Walter Burnside Knox
George Ferdinand Kurzman
Milton William Leggett
Edward Henry Lorenz
William Arthur Lowrie
William Wallace Lyons
Donald Stevenson McChesney
Alexander Laughlin McKaig

William Lippard McLean, Jr.
Harold Merriam March
Townsend Martin
William Hamlin Neely
John Simmons Nicholas
Herbert Naugle Odell
Elkins Oliphant
John James Parker, Jr.
Bernard Peyton
George Tybout Purves
William Joseph Rahill
Martin Sims Read
Kenneth McKibben Reed
William Frederick Reynolds, Jr.
Irving Riker
Richard Henry Ritter
George Louis Russell, Jr.
John Rutherfurd
Arthur Vandervoort Savage
Arthur Albert Schmon
Barrington West Sellers
Henry Dyer Moore Sherrerd
Bancroft Walker Sitterly
Herbert Reynolds Spencer
Elliott White Springs
George Rippey Stewart, Jr.
Ralph Wallace Stoeltzing
Perry MacKay Sturges
Edmund Taylor, Jr.
Cabell Breckinridge Ten Eyck
Marion Lowell Turrentine
Herman Lansing Vail
William Duncan Van Dyke, Jr.
George Graham Vest
John Winfield Voorhis
Joseph Wickes
Curtis Chandler Williams, Jr.

James Coburn Musser as of Class of 1911.

BACHELOR OF LETTERS (Litt.B.).....142

Thomas Hart Anderson, Jr.
Charles Malone Betts, III
Newton Philo Bevin, II
John Peale Bishop
John Baxter Black
Frederick Eller Bloom
William Gaillard Boaz
Francis Hermann Bohlen, Jr.
John Frederick Bohmfalk
William Harbaugh Bovey
Gavin Brackenridge
Samuel Smith Bryan, Jr.
Percy Heilner Buchanan
Robert Williamson Burns
Sargent Bush
George William Cale, III
John Woods Carpenter
Henry Chapin
Norman Merrill Chester
William Floyd Clarkson
Arthur Herbert Coffey
Henry Wallace Cohû
La Motte Turck Cohû
Kent Galbraith Colwell
Harold Dean Comey
Samuel Inman Cooper
Alfred Thomas Copeland
Harvey Lawrence Cory
Ralph Hinchman Cutler
William Lawrence Dempsey
John Marcus Denison
Willard Luther Lydecker De Yoe
Charles William Donahoe
Edwin Russell Dorrance
Wells Drorbaugh
Henry Teasdale Dunn

Edward Durell
Melville Alexander Eberhardt
William Alfred Eddy
Robert Nelson Errington
Bennet Hunter Ertel
Benjamin Franklin Etter
John Willard Everitt
Bernard Thatcher Feustman
Pell William Foster, Jr.
Joseph Herbert Frost
Randolph Fairfax Funsten
James Wilson Gailey
James McBrayer Garvey
Harold Frederick Gibson
James Bartley Given, Jr.
Perry Edwards Hall
John Ralph Hardin, Jr.
Le Roy Lowerre Harding
William Gardner Hayward
Walter Layton Heath
Charles Emanuel Heimerdinger
Frederick Max Heimerdinger
Edmund Samuel Hersh
Harvey Merrick Heywood
John Raymond Higgins
Charles Corson Highley
Henry Hamilton Hoyt
William Young Humphreys, Jr.
Theodore Brainerd Hunt
William Spry Hurlock, Jr.
Alan Jackman
David Ellsworth Jackman, Jr.
Norris Dean Jackson
Walter Haynes Johnson, Jr.
Graham Todd Johnston
Theodore Barnum Keating
David Walter Kempner
Arthur Reynolds Knott
Philip Blaine Knowlton
Harold Leach Laney
Charles Foster La Tour
Chauncey Depew Leake
Stuart MacArthur Link
Lewis Nelson Lukens, Jr.
William Gibbs McAdoo, Jr.
Richard Harper McCann
Gordon McCormick
Russell Miller McDonald
John Norman McDowell
Douglas Goeffrey McGrath
Edward Ford MacNichol
Donald Oliver MacRae
Alfred Mathiasen
Thomas Henry Miles, Jr.
Evan Jones Miller
William Blackshear Moore
Paul Daniel Nelson
Harry Hobson Neuberger
Frank John Newbury, Jr.
Frederick William Nixon
Robert Lee Nourse, Jr.
James Harold Osmer
Reginald Harrison Parsons
Daniel McKee Paulson
George Walbridge Perkins, Jr.
Donald Pettit
Lawrence Phillips
Richard Alexander Pierce
Richard Thomas Pilling, Jr.
George Franklin Plympton
Richard Chew Powell
Stayman Latimer Reed
William Platt Robertson
Frederick Vollmer Schaettler
William Scheerer, Jr.
Robert Colgan Schmertz
William Henry Schoen, Jr.
Charles MacCurdy Scott
John Thomas Scully
Bernard Michael Shanley
Jouett Fitch Singleton
Harvey Hassall Smith

Oliver Helmuth Smith
George Black Stericker
Walter Thaw Stockton
John Robert Stoltze
Oliver H. Stout
Edward La Nauze Strater
Merlin McFarland Taylor
William Henry Tenison
David Watts Tibbott
Reginald Tickner
Herbert Emil Twyeffort
Danford Bassett Tyler
Harold Benson Vollrath
Kenneth Sanford Wales
John David Warfield, Jr.
James Stratton Warren
Adolphus Leo Weil, Jr.
Ross Noble Wetherbee
Harwood Arend White
Francis Beacham Whitlock
Jerome Baker Wiss
Edgar Thurston Wolfe
Richard Ziesing, Jr.

John Robert Serena as of Class of 1916

BACHELOR OF SCIENCE (*B.S.*).....30

Philip Stanley Barba
William Bixler Barnitz
Hans Arthur Bluntschli
Allan Conover Brown
John Russell Carty
Henry Scholl Culver
Joseph Charles Cuneo
Gregg Dougherty
Solomon Richard Dresser
Robert Sinclair Gerstell
George Frank Hasslacher
Ashley Cooper Hewitt
Luther Goodrich Jones
Sealand Whitney Landon, Jr.
William Lyon Lowrie, Jr.
Robert Johnson McClintock
Vincent Taylor Manchee
James Dana Paull
Kenneth Augustus Phillips
Landon Thomas Raymond
Ralph Williams Raymond
Paul Mefford Runyon
Nelson Benson Sackett
Rudolph Nicholas Schüllinger
Christian Bernard Shea
George Brown Sheppard
George Erety Shoemaker, Jr.
Benjamin Muirheid Van Cleve, Jr.
Benjamin Stuart Walcott
Henry Wheeler Young

CIVIL ENGINEER (*C.E.*).....18

John Rea Chamberlin
Edmund Hope Driggs, Jr.
Vernon Boyd Farr
Charles Henry Folwell, Jr.
Herbert Rushforth Garside
Cyril Henry Haas
George Meade Holstein, Jr.
Charles Jared Ingersoll
Thomas Dudley Joeck
Ivor Frederick Llewellyn Kenway
Charles Hazlehurst Latrobe, Jr.
Donald Sutter McConnaughy
Albert Nacht
Henry Grove Rutledge
Casimir de Skarzynski
John Hoffman Stevens
Howard Reifsnyder Watt
Franklin Schenck Whitehouse

HONORS CONFERRED, 1916–1917

LATIN SALUTATORY

Marion Lowell Turrentine

VALEDICTORY

Sealand Whitney Landon, Jr.

FINAL SPECIAL HONORS

PHILOSOPHY AND PSYCHOLOGY

Highest Honors—John Winfield Voorhis.

High Honors—Samuel McClellan Butt.

Honors—Carl Franklin Arnold, Truman David Cameron, Chauncey Depew Leake, Merlin McFarland Taylor, Joseph Wickes.

HISTORY AND POLITICS

Highest Honors—Curtis Chandler Williams, Jr.

Honors—Thomas Hart Anderson, Jr., James McBrayer Garvey, Willard Luther Lydecker De Yoe.

ECONOMICS AND SOCIAL INSTITUTIONS

High Honors—Kenneth Sanford Wales.

Honors—Ross Noble Wetherbee.

ART AND ARCHAEOLOGY

Honors—Samuel Inman Cooper

ENGLISH

High Honors—George Rippey Stewart, Jr.

Honors—John Peale Bishop, William Thompson Black, Henry Chapin, Kent Galbraith Colwell, Richard Harper McCann, Arthur Albert Schmon.

MODERN LANGUAGES

GERMANIC

Honors—Marion Lowell Turrentine.

ROMANIC

Honors—Barrington West Sellers.

MATHEMATICS AND PHYSICS

Honors—Sealand Whitney Landon, Jr.

CHEMISTRY

Highest Honors—Gregg Dougherty.

High Honors—Vincent Taylor Manchee, Benjamin Stuart Walcott, Benjamin Muirheid Van Cleve, Jr.

ASTRONOMY

High Honors—Bancroft Walker Sitterly.

CIVIL ENGINEERING

High Honors—Vernon Boyd Farr.

Honors—Thomas Dudley Joeck.

SENIOR PRIZEMEN

LYNDE DEBATE PRIZES

First—Walter Haynes Johnson, Jr.

Second—William Bixler Barnitz

Third—John Simmons Nicholas

BAIRD PRIZES

The Baird Prize—Richard Henry Ritter

Oratory—John Simmons Nicholas

Delivery—John Winfield Voorhis

Poetry—John Peale Bishop

Disputation, first—Richard Henry Ritter

Disputation, second—Walter Haynes Johnson, Jr.

ALEXANDER GUTHRIE MCCOSH PRIZE IN PHILOSOPHY

John Winfield Voorhis

CLASS OF 1869 PRIZE IN ETHICS

John Winfield Voorhis

LAWRENCE HUTTON PRIZE IN HISTORY

Thomas Hart Anderson, Jr.

MANNERS PRIZE—WINNER OF THE GOLDEN TIGER

John Peale Bishop

Honorable Mention—Richard Henry Ritter

C. O. JOLINE PRIZE IN AMERICAN POLITICAL HISTORY

John Raymond Higgins

CLASS OF 1870 SENIOR PRIZE IN OLD ENGLISH

George Warren Phillips

JUNIOR PRIZEMEN

JUNIOR FIRST HONOR PRIZE

Divided equally between Leo Blumberg, Lee Carrington Bradley, Roland Bruce Lutz, and Henry DeWolf Smyth.

CLASS OF 1876 MEMORIAL PRIZE FOR DEBATE

Sydney Donald Sherrerd

JUNIOR ORATOR MEDALS

First—Sydney Donald Sherrerd
Second—Roland Bruce Lutz
Third—Lee Carrington Bradley
Fourth—John Chestnut Taylor

MACLEAN PRIZE

Roland Bruce Lutz

DICKINSON PRIZE

Roland Bruce Lutz

GARRETT PRIZE IN SOUTH AMERICAN HISTORY

Leo Blumberg

THOMAS B. WANAMAKER ENGLISH LANGUAGE PRIZE

Charles Irving Stewart

CLASS OF 1870 JUNIOR PRIZE IN ENGLISH

Edgerton Hazard

MARY CUNNINGHAM HUMPHREYS JUNIOR GERMAN PRIZE

Donald Goodchild

SOPHOMORE HONORMEN

BACHELOR OF ARTS COURSE

FIRST GROUP—*High General Honors*

Donald Moore King, Peabody High School, Pittsburgh, Pa.
Henry Pitney Van Dusen, William Penn Charter School, Philadelphia, Pa.

SECOND GROUP—*General Honors*

Benjamin Haggot Beckhart, East Denver High School, Denver, Colo.
Walter Denison Griffiths, Riverdale Country School, New York, New York.
Philip Miller Kretschmann, Central High School, Philadelphia, Pa.
Paul Robinson Norton, Boys High School, Reading, Pa.

BACHELOR OF LETTERS AND BACHELOR OF SCIENCE COURSE

FIRST GROUP—*High General Honors*

Stephen Mayer Auerbach, Columbia Grammar School, New York, New York
Arthur Tillotson Clark, High School, Flushing, N. Y.
Ralph Dyer McKee, High School, Bellevue, Pa.
Franklin Faust Snyder, Franklin and Marshall Academy, Lancaster, Pa.
Henry Lamont Wheeler, Jr., High School, Roselle, N. J.

SECOND GROUP—*General Honors*

Harold Meyer Baer, Shady Side Academy, Pittsburgh, Pa.
Allen Richard Bray, Lawrenceville School, Lawrenceville, N.J.
Samuel Newbold Cornly, Brunswick School, Greenwich, Conn.
Luther Richard Leinbach, Boys High School, Reading, Pa.
Ralph Lyman McGean, University School, Cleveland, Ohio.
Gilmer Meriwether, Jr., North East High School, Kansas City, Missouri.
Elmer Ward Munsell, Nicholas Prep. School, Buffalo, N. Y.
Paul Smith Olmstead, Trenton High School, Trenton, N. J.
John Shaffer Senseman, Harrisburg Academy, Harrisburg, Pa.
George Dickson Skinner, High School, Gouverneur, N. Y.
Donald MacQueen Street, University School, Chicago, Ill.
Arthur Edward Windels, Boys High School, Brooklyn, N. Y.

CIVIL ENGINEERING COURSE

SECOND GROUP—*General Honors*

William Beaumont Whitney Jr., Kent School, Kent, Conn.

SOPHOMORE PRIZEMEN

FRANCIS BIDDLE SOPHOMORE ESSAY PRIZE

Divided equally between Paul Robinson Norton and Sydney Baldwin Self

Honorable Mention—Ralph Dyer McKee

CLASS OF 1861 PRIZE
Allen Richard Bray III

CLASS OF 1870 SOPHOMORE ENGLISH PRIZE
Ralph Dyer McKee
Honorable Mention—Paul Robinson Norton

FRESHMEN HONORMEN

BACHELOR OF ARTS COURSE

SECOND GROUP—*General Honors*

Hiram Bellis Blauvelt, Phillips Academy, Andover, Mass.
Charles Lynn Carrick, Jr., Newark Academy, Newark, N. J.
George Howland Chase, 3rd, St. Paul's School, Concord, N. H.
Howard Cleveland Coxe, Pomfret School, Pomfret, Conn.
George Gillespie Fox, High School, Harrisburg, Pa.
William Irving Harris, High School, East Orange, N. J.
Lewis Haler Hitzrot, Philip's Exeter Academy, Exeter, N. H.
Rensselaer Wright Lee, High School, West Philadelphia, Pa.
David Hunter McAlpin, 3rd, Lake Placid School, Lake Placid, N. Y.
Raymond Sanger, East Side High School, Denver, Colo.
Louis Hirsch Sichelstiel, Shady Side Academy, Pittsburgh, Pa.
Harrison Bowne Smith, Princeton Prep. School, Princeton, N. J.
John Abert Wilson, Boys High School, Brooklyn, N. Y.

BACHELOR OF LETTERS AND BACHELOR OF SCIENCE COURSE

FIRST GROUP—*High General Honors*

Ray Foote Purdy, Manual Training School, Brooklyn, N. Y.

SECOND GROUP—*General Honors*

Marcus Lester Aaron, Peabody High School, Pittsburgh, Pa.
Robert Eugene Blue, High School, Englewood, N. J.
Harold Frederick Brigham, High School, Trenton, N. J.
Randoph Elijah Brown, High School, Englewood, N. J.
Charles Ewen Cameron, Montclair Academy, Montclair, N. J.
George William Dell, Christs Hospital, England.
Furman Addison DeMaris, Jr., Vocational School, Vineland, N. J.
James Barker Field, East Denver High School, Denver, Colo.
Julian Vincent Flaig, High School, Pottsville, Pa.
Raymond Leslie Hamilton, Newark Academy, Newark, N. J.
Warren Clark Hutchinson, Newark Academy, Newark, N. J.
Henry Keppele Miller, Jr., Friends School, Wilmington, Del.

William Seymour Mossman, High School, Fort Wayne, Pa.
William L. Powers, High School, Youngstown, Ohio.
Charles Grant Stachelberg, Franklin School, New York, N. Y.
Walter Blair Stewart, High School, Atlantic City, N. J.

FRESHMAN PRIZEMAN

CLASS OF 1883 FRESHMAN ENGLISH PRIZE IN THE SCHOOL OF SCIENCE

William Urner Gaver

PRIZE IN THE GRADUATE SCHOOL

MANNERS PRIZE

Winner of the Golden Tiger

John Peale Bishop

Honorable Mention—Richard Henry Ritter

PRIZE IN ELECTRICAL ENGINEERING

CHARLES IRA YOUNG MEMORIAL MEDAL

Walter van Braam Roberts

Honorable Mention—August John Mundt

PART XI

ALUMNI REPRESENTATION, GRADUATE COUNCIL, AND ALUMNI ASSOCIATIONS

PLAN OF ALUMNI REPRESENTATION IN THE BOARD OF TRUSTEES

1. The Board of Trustees of Princeton University shall be enlarged by the addition of five members to be known as Alumni Trustees, one to be elected yearly, and to be eligible for re-election, who shall hold office for a term of five years from and after their election.

2. No one shall be eligible for election as an Alumni Trustee except a graduate of Princeton University of not less than ten years' standing. All graduates of Princeton University of not less than three years' standing, who have paid the enrolment fee of one dollar, shall be entitled to nominate and vote for Alumni Trustees at any election. If, however, during a period of five consecutive years, an enrolled graduate shall not have availed himself of the privilege of nominating or voting for Alumni Trustees his name shall be removed from the list, and it can be restored again only upon his application and the payment of another enrolment fee.

3. The Alumni Trustees shall elect a Secretary of the Alumni, who shall also act as Treasurer, and they shall fix his term of service and compensation, which shall be paid from the enrolment fees. He shall have charge of the enrolment and shall expend the fees received for such purposes as may be authorized by the Alumni Trustees. No member of the Faculty or Board of Trustees shall act as secretary.

4. In January of each year the secretary shall issue a call for the nomination of candidates to be voted for at the next election. Nominations must be signed and forwarded to the secretary before the first of April, on which date nominations shall close. Only those who have been nominated by at least twenty enrolled graduates shall be candidates for election. On or before the first of May of each year the secretary shall send to every enrolled graduate an official ballot with directions how to mark the same, and a return envelope marked confidential and addressed to the secretary. Whenever there shall be more than one candidate for any one Trusteeship the secretary shall send with every official ballot a printed list containing the names and addresses of all the candidates for such

Trusteeship together with the names and addresses of those proposing them. An enrolled graduate who has lost or failed to receive the original official ballot sent to him shall be entitled to receive a duplicate ballot upon application to the Secretary.

5. The annual election for Alumni Trustees shall be held in Princeton on Commencement day, and the polls shall close at 1 p. m. The Secretary, a member of the Faculty and a member of the Board of Trustees, to be appointed by their respective bodies, shall act as tellers and have entire charge of the elections. The tellers shall act by a majority, and in case of the absence or disability of any teller the President of the University shall name a substitute or substitutes to fill any vacancies so existing. Electors may cast their ballots in person or by mail, and all ballots received by the secretary shall be held by him unopened until after the closing of the polls, when they shall be delivered to the tellers. The tellers before entering upon their duties shall take an oath that they will conduct the election fairly and will not reveal to anyone how any elector has voted.

6. Within twenty-four hours after the closing of the polls, the tellers shall open the ballots received from the secretary, complete the count of the vote and certify in writing to the Board of Trustees the name of the candidate or candidates receiving the highest number of votes, and also the number of votes received by each candidate. They shall make public the name of the Trustee or Trustees so elected, but shall not divulge the number of votes cast for the various candidates. In case of a tie vote, the election shall be decided by the drawing of lots.

7. Any vacancy occurring among the Alumni Trustees by death, resignation, or otherwise, shall be filled at the next election in the manner prescribed in sections 4 and 5 of this plan.

[For list of present Alumni Trustees, see page 18.]

THE GRADUATE COUNCIL OF PRINCETON UNIVERSITY

Chairman: Francis G. Landon, 29 Broadway, New York, N. Y.
Vice-Chairman: Walter E. Hope, 49 Wall St., New York, N. Y.
Acting Secretary: V. L. Collins, Princeton, N. J.
Executive Secretary: Charles Browne, Princeton, N. J.

Committee on Finance. Chairman: D. Q. Brown '95, 11 Broadway, New York, N. Y.

Committee on Class Organization. Chairman: A. G. Todd '84, 165 Broadway, New York, N. Y.

Committee on Schools. Chairman: S. G. Etherington '06, 50 E. 42d St., New York, N. Y.

Committee on Publicity. Chairman: A. C. Imbrie '95, 320 Broadway, New York, N. Y.

Committee on Undergraduate Activities. Chairman: H. C. Potter, Jr., '98, 605 Chestnut St., Philadelphia, Pa.

Committee on Alumni Associations. Chairman: John Stuart '00, Railway Exchange Bldg., Chicago, Illinois.

District Representatives:

N. Booth Tarkington '93, 1100 Penn Ave., Indianapolis, Ind.
Charles L. Hamilton '95, 815 Liberty Ave., Pittsburgh, Pa.
John Stuart '00, Railway Exchange Bldg., Chicago, Ill.
Thomas S. McPheeters '03, Rialto Bldg., St. Louis, Mo.

Class Representatives:

'83 Frank C. Roberts, Real Estate Trust Bldg., Philadelphia, Pa.
'84 A. G. Todd, 165 Broadway, New York, N. Y.
'85 J. Woods Brown, 1510 Walnut St., Philadelphia, Pa.
'86 W. F. Timlow, 7 Wall St., New York, N. Y.
'87 Hon. John W. Queen, 15 Exchange Place, Jersey City, N. J.
'88 Dr. B. VanD. Hedges, 518 Watchung Ave., Plainfield, N. J.
'89 Henry C. Irons, 101 Park Ave., New York, N. Y.
'90 John I. Bright, 1701 Chestnut St., Philadelphia, Pa.
'91 Edgar A. Poe, 1604 Park Ave., Baltimore, Md.
'92 V. L. Collins, Princeton, N. J.

'93 Albert C. Hencken, 91 William St., New York, N. Y.
'94 Malcolm Lloyd, Jr., 328 Chestnut St., Philadelphia, Pa.
'95 Dickson Q. Brown, 11 Broadway, New York, N. Y.
'96 Dr. Charles Browne, Princeton, N. J.
'97 John M. Frame, 526 Washington St., Reading, Pa.
'98 H. S. Paine, 26 Broadway, New York, N. Y.
'99 J. H. Harrison, 810 Broad St., Newark, N. J.
'00 F. P. King, 32 Nassau St., New York, N. Y.
'01 W. E. Hope, 49 Wall St., New York, N. Y.
'02 Charles A. Cass, 200 Fifth Ave., New York, N. Y.
'03 Albridge C. Smith, Jr., 24 Broad St., New York, N. Y.
'04 Howard H. Henry, Fort Washington, Pa.
'05 Charles H. Mathews, 1539 Chestnut St., Philadelphia, Pa.
'06 Sanford G. Etherington, 341 Fifth Ave., New York, N. Y.
'07 Gordon S. Rentschler, Hamilton, Ohio.
'08 A. C. Studer, Jr., Montclair, N. J.
'09 Harry G. Treadwell, 132 W. 183d St., New York, N. Y.
'10 Richard F. Weeks, 61 Broadway, New York, N. Y.
'11 Maitland Dwight, 2131 Bancroft Pl., Washington, D. C.
'12 Ralph Higgins, 165 Broadway, New York, N. Y.
'13 Alden D. Groff, 46 Cedar St., New York, N. Y.
'14 John Milton Colt, Citizens Union, 41 Park Row, New York, New York.
'15 Donald C. Myrick, 2105 Highland Ave., Los Angeles, Calif.
'16 Harold D. Harvey, 39 Cortland St., New York, N. Y.
'17 R. Eberstadt, East Orange, N. J.

Members at Large:

Francis Speir '77, 52 Wall St., New York, N. Y.
Francis G. Landon '81, 29 Broadway, New York, N. Y.
William T. Vlymen '81, Hempstead, N. Y.
A. H. Larkin '87, 54 Wall St., New York, N. Y.
W. S. Arbuthnot '87, 801 Penn Ave., Pittsburgh, Pa.
P. A. Rollins '89, 32 Nassau St., New York, N. Y.
Glenn Ford McKinney '91, 52 William St., New York, N. Y.
L. C. Woods '91, Frick Bldg., Pittsburgh, Pa.
George W. Burleigh '92, 52 William St., New York, N. Y.
George C. Fraser '93, 20 Exchange Place, New York, N. Y.
James E. Bathgate, Jr., '94, care of John Darling & Co., 456 4th Ave., New York, N. Y.
Andrew C. Imbrie '95, 320 Broadway, New York, N. Y.

Emory L. Ford '96, Ford Bldg., Detroit, Mich.
H. C. Potter, Jr., '98, 605 Chestnut St., Philadelphia, Pa.
C. H. Higgins '03, 165 Broadway, New York, N. Y.

GRADUATE COUNCIL DEPARTMENT CONFERENCE COMMITTEES

Economics and Social Institutions: George C. Fraser '93, *Chairman;* Adrian H. Larkin '87, Frederick Strauss, Benjamin Strong, John A. Campbell '77.

Classics: Arthur H. Scribner '81, *Chairman;* Philip A. Rollins '89, Frank A. Vanderlip, Paul D. Cravath.

History and Politics: Frederick P. King '00, *Chairman;* A. G. Todd '84, C. W. Halsey '98, Robert Lansing, Charles D. Norton, William M. Sloane.

Astronomy: John Larkin '82, *Chairman;* A. A. Gulick '97, A. D. Russell.

Geology and Palaeontology: Philip A. Rollins '89, *Chairman;* Francis Speir '77.

Civil Engineering: Wilbur C. Fisk '90, *Chairman;* Knox Taylor '95, William P. Field '83, Gabriel S. Brown '94, Francis O. Blackwell '87, Jasper Crane '01, Dickson Q. Brown '95, Charles H. Higgins '03, General George W. Goethals.

Chemistry: Charles A. Munn '81, *Chairman;* Emory L. Ford '96, Charles H. Higgins '03.

ALUMNI ASSOCIATIONS

WESTERN ASSOCIATION OF PRINCETON CLUBS

Secretary, Edward W. Hamilton, Esq., '96, Marine National Bank Bldg., Buffalo, N. Y.

PRINCETON ENGINEERING ASSOCIATION

Secretary, Charles H. Higgins, Esq., 1903, 165 Broadway, New York, N. Y.

ARKANSAS

PRINCETON ALUMNI ASSOCIATION OF ARKANSAS

Secretary, A. H. Scott, 1908, 1017 Southern Trust Bldg., Little Rock, Ark.

CALIFORNIA

PRINCETON CLUB OF SOUTHERN CALIFORNIA

Secretary, D. S. Hammack, 1906, 419 American Bank Bldg., Los Angeles, Cal.

PRINCETON ALUMNI ASSOCIATION OF NORTHERN CALIFORNIA AND NEVADA

Secretary, R. F. Coyle, 1907, 667 61st St., Oakland, Cal.

COLORADO

ROCKY MOUNTAIN PRINCETON CLUB

Secretary, L. R. Kendrick, Esq., 1910, 205 Logan St., Denver, Colorado.

DELAWARE

PRINCETON ALUMNI ASSOCIATION OF DELAWARE

Secretary, John F. Neary, Esq., 1900, duPont Bldg., Wilmington, Delaware.

DISTRICT OF COLUMBIA

PRINCETON ALUMNI ASSOCIATION OF THE DISTRICT OF COLUMBIA

Secretary, Wm. J. Flather, Jr., Esq., 1911, 737 Fifteenth St., N.W., Washington, D. C.

GEORGIA

PRINCETON ALUMNI ASSOCIATION OF ATLANTA

Secretary, Carl Fox, 1904, 8 Gilmer St., Atlanta, Ga.

IDAHO

PRINCETON ALUMNI ASSOCIATION OF IDAHO

Secretary, P. B. Carter, Esq., 1905, 310 Boise City National Bank Bldg., Boise City, Idaho.

ILLINOIS

PRINCETON CLUB OF CHICAGO

Secretary, William S. Warfield III, Esq., 1910, 1539 First National Bank Bldg., Chicago, Ill.

INDIANA

PRINCETON ALUMNI ASSOCIATION OF INDIANA

Secretary, Thomas A. Hendricks, Esq., 1915, 1127 No. Meridian St., Indianapolis, Ind.

IOWA

PRINCETON CLUB OF CEDAR RAPIDS

Secretary, Arthur Poe, Esq., 1900, care of Quaker Oats Co., Cedar Rapids, Iowa.

KENTUCKY

PRINCETON ALUMNI ASSOCIATION OF LOUISVILLE

Secretary, John A. Miller, Esq., 1913, 315 Raymond Street, Louisville, Ky.

MARYLAND

PRINCETON ALUMNI ASSOCIATION OF MARYLAND

Secretary, Horatio W. Turner, Esq., 1909, 906 Garrett Building, Baltimore, Md.

MASSACHUSETTS

PRINCETON ALUMNI ASSOCIATION OF NEW ENGLAND

Secretary, John S. Nicholl, 1906, 491 Main St., Cambridge, Mass.

MICHIGAN

PRINCETON ALUMNI ASSOCIATION OF MICHIGAN

Secretary, Albert E. Van Court, Esq., 1914, 870 Jefferson Ave., Detroit, Mich.

MINNESOTA

PRINCETON ALUMNI ASSOCIATION OF THE NORTHWEST

Secretary, Edward Karow, Esq., 1905, Minneapolis Street Railway Company, Minneapolis, Minn.

MISSOURI

PRINCETON CLUB OF KANSAS CITY

Secretary, John C. Long, Esq., 1903, 3332 Summit St., Kansas City, Mo.

PRINCETON CLUB OF ST. LOUIS

Secretary, John S. Lionberger, Esq., 1911, Security Bldg., St. Louis, Mo.

NEBRASKA

PRINCETON ALUMNI ASSOCIATION OF NEBRASKA

Secretary, Arthur R. Wells, Esq., '95, 524 Omaha National Bank Bldg., Omaha, Neb.

NEW JERSEY

PRINCETON ALUMNI ASSOCIATION OF NORTHERN NEW JERSEY

Secretary, Arthur P. Washburn, Esq., 1907, 15 Waverly Place, New York, N. Y.

PRINCETON ALUMNI ASSOCIATION OF HUDSON COUNTY, N. J.

Secretary, Otto F. Seggel, Esq., 1903, 358 Central Ave., Jersey City, N. J.

PRINCETON ALUMNI ASSOCIATION OF MONTCLAIR AND VICINITY

Secretary, Benjamin E. Messler, Esq., 1903, Holland Terrace, Montclair, N. J.

PRINCETON CLUB OF NEWARK

Secretary, Harry F. Bliss, Esq., 1906, 240 Grafton Ave., Newark, New Jersey.

PRINCETON ALUMNI FEDERATION OF NEW JERSEY

Secretary, Howard Carter, Esq., 1901, 100 Broadway, New York, New York.

PRINCETON ALUMNI ASSOCIATION OF THE ORANGES

Secretary, Franklin W. Fort, Esq., 1901, 70 Carleton St., East Orange, N. J.

PRINCETON ALUMNI ASSOCIATION OF PASSAIC COUNTY

Secretary, Robert Williams, Esq., '81, 385 Park Ave., Paterson, N. J.

PRINCETON CLUB OF PLAINFIELD

Secretary, Albert D. Beers, Esq., 1907, 420 Stelle Ave., Plainfield, N. J.

PRINCETON CLUB OF TRENTON

Secretary, Edward D. Miers, Esq., 1908, American Mechanics Bldg., Trenton, N. J.

NEW YORK

PRINCETON ALUMNI ASSOCIATION OF NORTHERN NEW YORK
Secretary, Edward E. Rankin, Esq., 1909, Cherry Hill, Albany, N. Y.

PRINCETON ALUMNI ASSOCIATION OF LONG ISLAND
Secretary, Christopher D. Robert, Esq., 1904, 261 Hicks St., Brooklyn, N. Y.

PRINCETON CLUB OF BUFFALO
Secretary, Marshall Coxe, Esq., 1906, Box 669, Buffalo, N. Y.

PRINCETON CLUB OF NEW YORK
Secretary, Witherbee Black, Esq., '01, 594 Fifth Avenue, New York, N. Y.

PRINCETON ALUMNI ASSOCIATION OF ROCHESTER, N. Y., AND VICINITY
Secretary, Richard Macy Harris, Esq., 1915, 1127 East Avenue, Rochester, N. Y.

PRINCETON ALUMNI ASSOCIATION OF SOUTHERN NEW YORK AND CONNECTICUT
Secretary, C. N. Peacock, Esq., 1910, 850 Seventh Ave., New York, N. Y.

PRINCETON ALUMNI ASSOCIATION OF CENTRAL NEW YORK
Secretary, Stuart F. Raleigh, Esq., 1911, care of Merrell-Soule Co., Syracuse, N. Y.

OHIO

PRINCETON ALUMNI ASSOCIATION OF CINCINNATI
Secretary, Robert M. Green, Esq., 1913, care of Proctor & Gamble, Cincinnati, Ohio.

PRINCETON ALUMNI ASSOCIATION OF NORTHERN OHIO
Secretary, John H. Drummond, Esq., 1911, 221 Electric Bldg., Cleveland, Ohio.

PRINCETON ALUMNI ASSOCIATION OF COLUMBUS AND VICINITY
Secretary, Herbert B. Halliday, Esq., 1905, Citizens Trust and Savings Bank Bldg., Columbus, Ohio.

PRINCETON ALUMNI ASSOCIATION OF TOLEDO
Secretary, Dr. William G. Dice, '93, 240 Michigan St., Toledo, Ohio.

PENNSYLVANIA

PRINCETON ALUMNI ASSOCIATION OF ERIE
Secretary, Spencer A. Sisson, Esq., 1912, 722 State St., Erie, Pa.

CENTRAL PENNSYLVANIA ALUMNI ASSOCIATION OF PRINCETON UIVERSITY
Secretary, W. H. Musser, Esq., '96, 216 N. Second St., Harrisburg, Pa.

PRINCETON CLUB OF PHILADELPHIA
Secretary, Walter W. N. Righter, Esq., 1906, 1223 Locust St., Philadelphia, Pa.

PRINCETON ALUMNI ASSOCIATION OF WESTERN PENNSYLVANIA
Secretary, Frederick H. Atwood, Esq., 1913, 1323 Farmers Bank Bldg., Pittsburgh, Pa.

PRINCETON ALUMNI ASSOCIATION OF NORTHEASTERN PENNSYLVANIA
Secretary, Gilbert S. McClintock, Esq., 1908, 34 South River St., Wilkes-Barre, Pa.

TENNESSEE

PRINCETON ALUMNI ASSOCIATION OF TENNESSEE
Secretary, Walter H. Watkins, Esq., 1909, Hamilton National Bank Bldg., Chattanooga, Tenn.

TEXAS

THE BORDER ASSOCIATION
Secretary, T. B. Newman, Esq., 1913, care of Newman Investment Co., El Paso, Texas.

PRINCETON ALUMNI ASSOCIATION OF TEXAS
Secretary, Charles C. Cresson, Jr., Esq., '95, Alamo Bank Bldg., San Antonio, Texas.

UTAH

INTER-MOUNTAIN PRINCETON ASSOCIATION
Secretary, Renwick S. McNiece, Esq., 1907, 1136 Blaine Ave., Salt Lake City, Utah.

WASHINGTON

PRINCETON CLUB OF SEATTLE
Secretary, John H. Watrous, Esq., 1913, 1121 Sixteenth Ave., Seattle, Wash.

PART XII

LIST OF STUDENTS, DIRECTORY AND INDEX

STUDENTS OF THE UNIVERSITY

STUDENTS IN THE GRADUATE SCHOOL

FELLOWS

Allen, Morse Shepard, Brooklyn, N. Y., 21 G C
A.B., Wesleyan University, 1912.
A.M., Wesleyan University, 1912.
A.M., Columbia University, 1913.
Charlotte Elizabeth Procter Fellow.

Bowman, Henry Newpher, N. Lancaster, Pa., 128 G C
A.B., Franklin and Marshall College, 1914.
A.M., Princeton University, 1915.
John Harding Page Fellow in Classics.

Buermeyer, Laurence Ladd, Reading, Pa., 144 G C
A.B., University of Pennsylvania, 1912.
A.M., Princeton University, 1917.
Charlotte Elizabeth Procter Fellow.

Butt, Samuel McClellan, Bloomsbury, N. J., 114 G C
A.B., Princeton University, 1917.
Chancellor Green Fellow in Mental Science.

Carmichael, Fitzhugh Lee, Goodwater, Alabama, 14 A S
A.B., University of Alabama, 1913.
A.M., University of Alabama, 1917.
J. S. K. Fellow in Mathematics.

Cockfield, William Egbert, Montreal, Canada, 1B, G C
A.B., McGill University, 1913.
B.Sc., McGill University, 1914.
M.Sc., McGill University, 1915.
Charlotte Elizabeth Procter Fellow.

Deferrari, Roy Joseph, Stoneham, Mass., 152 G C
A.B., Dartmouth College, 1912.
A.M., Princeton University, 1913.
Ph.D., Princeton University, 1915.
Charlotte Elizabeth Procter Fellow.

Friend, Albert Mathias, Jr., Ogontz, Pa., 15A, G C
Litt.B., Princeton University, 1915.
A.M., Princeton University, 1917.
Charlotte Elizabeth Procter Fellow.

George, Wesley Critz, Mount Airy, N. C., 2A, G C
A.B., University of North Carolina, 1911.
A.M., University of North Carolina, 1912.
Francis Hinton Maule Fellow in Biology.

Giessing, Charles Paul, Brooklyn, N. Y., 24 G C
A.B., Cornell University, 1914.
A.M., Cornell University, 1915.
Ph.D., University of Wisconsin, 1917.
Charlotte Elizabeth Procter Fellow.

Giraud, Antony Pastor, Havana, Cuba, 148 G C
B.S., University of Seville (Spain), 1908.
A.M., Princeton University, 1917.
Class of 1860 Fellow in Experimental Science.

Harding, Earle Atherton, Lewiston, Maine, 52 Jefferson Rd.
B.S., Bates College, 1915.
A.M., Princeton University, 1917.
Gordon Macdonald Fellow.

Hunt, Theodore Brainerd, Metuchen, N. J., 101 G C
Litt.B., Princeton University, 1917.
Class of 1873 Fellow in English.

McCallum, James Dow, Nutley, N. J., 2B, G C
A.B., Columbia University, 1914.
Charles Scribner University Fellow in English Literature.

Nourse, Laurence Gunnison, Newport, New Hampshire, 102 G C
A.B., Dartmouth College, 1917.
J. S. K. Fellow in Mathematics.

Perry, Ben Edwin, Ann Arbor, Mich., 126 G C
A.B., University of Michigan, 1915.
A.M., University of Michigan, 1916.
Fellow in Classics.

Sitterly, Bancroft Walker, Madison, N. J., 15D, G C
A.B., Princeton University, 1917.
Thaw Fellow in Astronomy.

Twining, Simon Ercile, Bloomington, Ind., 14B, G C
Ph.B., University of Notre Dame, 1913.
A.M., Indiana University, 1914.
A.M., Princeton University, 1917.
Charlotte Elizabeth Procter Fellow.

Weiskotten, Herbert Theberath, Brooklyn, N. Y. 112 G C
A.B., Columbia University, 1914.
A.M., Princeton University, 1915.
Fellow in Classics.

GRADUATE SCHOLAR

Hammond, Edward Sanford, New Haven, Conn., 31 Williams St.
A.B., Yale University, 1913.
A.M., Yale University, 1915.
Theodore Cuyler Graduate Scholar

GRADUATE STUDENTS

Batten, Joseph Minton, Chuckatuck, Va., 72 B S
A.B., Randolph Macon College, 1912.
A.M., Randolph Macon College, 1912.

Belknap, Maitland, New York, N. Y., 124 G C
Litt.B., Princeton University, 1912.
B.Arch., Columbia University, 1917.

Bickford, John Dean, New Castle, Del., 14D, G C
A.B., Princeton University, 1911.
A.M., Princeton University, 1914.

Bissell, Philip TenBroeck, Pittsburgh, Pa., 154 G C
A.B., Hamilton College, 1917.

Brown, Leon Atwood, Troutman, N. C., 15D, G C
A.B., Erskine College, 1916.

Campbell, James Marshall, Warsaw, N. Y., 23 G C
A.B., Hamilton College, 1917.

Dickson, Stanley Smith, Paris, Ky., 14C, G C
A.B., Centre College, 1917.

Ho, Mo, Canton, China, 11C, G C
Ph.B., University of Chicago, 1917.

Hunter, William Columbus, Paris, Ill., 156 G C
A.B., Princeton University, 1905.
A.M., Harvard University, 1911.

Kawakatsu, Kurata, Kyota, Japan, 76 B S
Waseda University, 1908.

O'Brien-Moore, Ainsworth, Los Angeles, Cal., 104 G C
A.B., Princeton University, 1916.

Samuels-Lall, Parmanand, Lahore, India, 16 B S
B.Sc., Punjab University, 1904.
A.M., Punjab University, 1910.

Shafer, Bentley Sayre, Montrose, Pa., 15C, G C
A.B., Lehigh University, 1917.

Stohlman, William Frederick, New York, N. Y., 122 G C
A.B., Princeton University, 1909.
A.M., Princeton University, 1917.

Vinacke, Harold Monk, Proctor, Col., 16 Park Place
A.B., University of Denver, 1914.

STUDENTS ON PART TIME

Anderson, Alexander Graham, Charlotte C. H., Va., 41 B S
B.S., Virginia Polytechnic Institute, 1907.
B.D., Princeton Theological Seminary, 1915.

Beltman, Henry, Orange City, Iowa, 205 H S
A.B., Hope College, 1916.

Blakely, Hunter Bryson, Willington, S. C., 417 H S
A.B., Erskine College, 1914.

Boand, Arthur Victor, Kansas City, Mo., 403 H S
A.B., Westminster College (Mo.) 1916.

Bouma, Clarence, Grand Rapids, Mich., 21 B S
A.B., Calvin College, 1917.

Bowman, John Wick, Uniontown, Pa., 15 A S
A.B., College of Wooster, 1916.

Brotemarkle, Robert Archibald, Salisbury, Md., 12 A S
A.B., Princeton University, 1916.

*Burns, Robert Martin, Olathe, Colorado, 2A, G C
A.B., University of Colorado, 1915.
A.M., University of Colorado, 1916.

Buschman, Leonard Victor, California, Mo., 20 A S
A.B., Westminster College (Mo.), 1915.

Caldwell, Daniel Templeton, Mount Ulla, N. C., 206 H S
A.B., Davidson College, 1914.
B.D., Union Theological Seminary, 1917.

Carey, Thomas Derby, Moosic, Pa., 215 H S
A.B., Lafayette College, 1916.

Clarke, Robert, Beaver Falls, Pa., 230 Nassau St.
B.S., Geneva College, 1898.

Cost, Harry Fulton, Irwin, Pa. 200 H S
A.B., Washington and Jefferson College, 1916.

*Cude, Harold Eugene, Doniphan, Mo., 54 Murray Pl.
B.S., Central College, 1910.
M.S., Vanderbilt University, 1911.

Davidson, Dwight Brooker, Corapolis, Pa., 2 A S
A.B., College of Wooster, 1916.

DeGroot, William, Grand Rapids, Mich., 23 Bank St.
Grand Rapids Theological School, 1894.

Edmunds, Horatio Spencer, Webster Groves, Mo., 208 H S
A.B., Westminster College (Mo.), 1916.

Eells, Hastings, Worcester, Mass., 203 H S
A.B., Clark University, 1916.

Gehman, John Luke, Martinsdale, Pa., 201 H S
A.B., Bucknell University, 1914.

Greenleaf, Walter James Portland, Maine, 23 G C
A.B., Bowdoin College, 1912.

Grier, Joseph Lee, Camden, Alabama, 317 H S
A.B., Erskine College, 1912.

Hansel, Ernest, Brooklyn, N. Y., 15 B S
B.D., Newark Theological School, 1910.

Kauffman, John Elijah, Altoona, Pa., 45 B S
A.B., Defiance College, 1913.
A.M., Bucknell University, 1914.

Kleffman, Albert Henry, Baltimore, Md., 213 H S
A.B., Lebanon Valley College, 1916.

*Part time assistant.

Logan, Robert Lee, Germantown, Pa., 33 A S
A.B., Lafayette College, 1916.

Long, Ward Willis, Spencerville, O., 25 A S
A.B., Taylor University, 1915.

Orwig, Samuel Earl, Phillipsburg, Pa., 29 B S
A.B., Grove City College, 1914.

Robinson, Stewart MacMaster, Philadelphia, Pa., 31 Edwards Pl.
A.B., Princeton University, 1915.

Roeandt, August, Petrograd, Russia, 204 H S
A.B., Baldwin-Wallace College, 1916.
S.T.B., Boston University, 1917.

Rowland, Reginald, Clinton, N. J., 31 A S
A.B., Princeton University, 1915.

Schweitzer, Frederick, Philadelphia, Pa., 206 H S
A.B., Princeton University, 1915.
A.M., Princeton University, 1916.

Selby, Raymond, Oakland City, Ind., 404 H S
A.B., Indiana University, 1911.

Stocker, Mortimer Menville, Honesdale, Pa., 315 H S
A.B., Lafayette College, 1917.

Townley, John, Lyons, Kansas, 7 B S
A.B., Emporia College, 1917.

VanDyke, Martin, Paterson, N. J., 407 H S
A.B., Princeton University, 1915.

Voorhis, John Winfield, Ocean Grove, N. J., 401 H S
A.B., Princeton University, 1917.

Wenzlick, Roy Willis, St. Louis, Mo., 400 H S
A.B., Westminster College, 1916.

Wilson, J Christy, Idaho Falls, Idaho, 95 Mercer St.
A.B., Kansas State University, 1914.

Wu, Andrew Veeteh, Chekiang, China, 34 A S
B.S., College of Wooster, 1916.

Fellows	19
Graduate Scholar	1
Students on Full Time	15
Students on Part Time	39
	74

UNDERGRADUATES

SENIOR CLASS, 1918

CANDIDATES FOR THE A.B. DEGREE

Barret, John Henry,	Princeton, N. J.,	34 H
Black, William,	Pittsburgh, Pa.,	93 H
Bowman, Johnston Alexander,	Chicago, Ill.,	164 Nassau St.
Buchanan, Joseph Clark,	Chambersburg, Pa.,	12 C
Christie, Alfred Ellison,	Trenton, N. J.,	8 S R
*Crossley, Archibald Maddock,	Trenton, N. J.,	5 N R
Dennis, Holmes Van Mater, III,	New Brunswick, N. J.,	144 L
Drohan, John Henry,	Brooklyn, N. Y.,	5 E M W
Dubbs, Henry Millington, Jr.,	Philadelphia, Pa.,	6 S R
Duncan, William Grinstead,	Louisville, Ky.,	43 '79 H
Flinn, Lewis Barr,	Wilmington, Del.,	133 L
Gillette, Alfred Adams,	Rome, N. Y.,	2 A H
Goldstein, Israel,	New York, N. Y.,	9 S W
Goodchild, Donald,	Middletown, N. J.,	27 M D
Hazard, Edgerton,	New York, N. Y.,	18 S W
Herron, Pomeroy Jardon,	Pittsburgh, Pa.,	61 '79 H
Herron, Samuel Davidson,	Pittsburgh, Pa.,	61 '79 H
Ireland, Thomas Saxton,	Denver, Colo.,	13 U P
McNulty, John Owen,	Columbus, Ga.,	7 Park St.
Middleditch, Francis Armstrong,	Westfield, N. J.,	5 S W
Miller, Clark,	Pittsburgh, Pa.,	26 C
Morgan, George Frederick, Jr.,	New York, N. Y.,	43 L
Parker, Percy, Jr.,	Lowell, Mass.,	25 S E
Roche, Harding Sanford,	East Orange, N. J.,	21 B
Schwabacher, Wolfgang Simon,	Newark, N. J.	103 B
*Sears, Laurence Milton,	Syracuse, N. Y.,	15 S M R
Smyth, Henry De Wolf,	Princeton, N. J.,	66 C
Van Tuyl, Ray Whittier,	Minneapolis, Minn.,	93 H
Vogt, Ernest Louis,	Louisville Ky.,	43 '79 H
Ward, Marquand,	New York, N. Y.,	Guernsey Hall
Woods, Joseph Milliken, Jr.,	Lewistown, Pa.,	9 S R

A.B. SENIORS..... 31

* Candidate for degree in February, 1919.

CANDIDATES FOR THE LITT.B. DEGREE

Armstrong, Sinclair Wallace,	Middletown, Conn.,	10 E W
Arnold, David Ralph Jaques,	Staten Island, N. Y.,	51 B
Babson, Thomas Everett,	Arlington, N. J.,	3 E M W
*Ball, Fred St. Clair,	Montgomery, Ala.,	15 B
Barnum, Paul Thurman,	California, Pa.,	23 L
Biggs, John, Jr.,	Wilmington, Del.,	42 C
Blumberg, Leo,	Jersey City, N. J.,	6 S W
Bonbright, Carl Windus,	Flint, Mich.,	34 C
Bowman, William McKnight,	Springfield, Ohio,	20 W W
Bradley, Lee Carrington, Jr.,	Birmingham, Ala.,	34 H
Bryan, Francis Theodore, IV,	St. Louis, Mo.,	22 '79 H
*Burch, Harry Jackson,	Washington, D. C.,	54 C
Butts, Lucius McCutchen,	Vicksburg, Miss.,	11 H
Carver, Alexander Burton,	Yonkers, N. Y.,	34 C
Cherry, George Denison,	Little Rock, Ark.,	44 '79 H
Cooper, Norman Hilliard,	Belleville, N. J.,	4 N R
Crane, Frederick Ralph,	Brooklyn, N. Y.,	3 A, H
Creese, James, Jr.,	Leetsdale, Pa.,	9 N R
Currie, Edward William,	Keyport, N. J.,	9 S E
Eaby, Carl Reese, Jr.,	Lancaster, Pa.,	31 B
English, Thomas Hopkins,	Gillespie, Ill.,	24 N E
Fitzgerald, Francis Scott,	St. Paul, Minn.,	24 C
Godfrey, Samuel,	Atlantic City, N. J.,	31 B
Hammer, Wesley Thompson,	East Orange, N. J.,	4 S M R
Heimerdinger, Henry Liebmann,	New York, N Y.,	103 B
Jones, James McLain,	Springfield, Mo.,	2 A, H
Kazanjian, Bedros, Jr.,	New Rochelle, N. Y.,	64 '79 H
Kiehl, Marshall Babst,	Pittsburgh, Pa.,	43 L
Lampley, Ira Tullis,	Eufaula, Ala.,	15 B
McCauley, Edwin Douglas,	Highland Park, Ill.,	Campus Club
Manee, William Britton,	New York, N. Y.,	5 W W
Marvin, William Bryan,	Stroudsburg, Pa.,	1 N M R
Mayer, William Stephens,	Johnstown, Pa.,	62 L
Millinger, Walter Harold,	Chicago, Ill.,	Murray Dodge Hall
Murray, Arthur Benson,	Schenectady, N. Y.,	113 B
Phillips, George Warren,	Helmetta, N. J,	Helmetta, N. J.
Planas, Harold Miguel,	New York, N. Y.,	46 Wiggins St.
Rankin, John Millington,	S. Charleston, Ohio,	8 S W
Scobie, Jordan Ralston,	Omaha, Neb.,	20 N W

* Candidate for degree in February, 1919.

Sinclaire, Douglas Cumming,	Corning, N. Y.,	13 S D
Stevenson, Stuart Riddle,	Schenectady, N. Y.,	83 Mercer St.
Stewart, Charles Irving,	Ossining, N. Y.,	14 C, G C
Taylor, John Chestnut, Jr.,	Shade Gap, Pa.,	44 '79 H
Teng, Shao Ping,	Washington, D. C.,	26 N E
Thompson, Kirk Illman,	Titusville, Pa.,	22 '79 H
von Hasslacher, Harold,	Brooklyn, N. Y.,	3 A, H
Wang, Knochum Penn,	Washington, D. C.,	3 Madison St.
Widenmann, Hans Adolf Carl,	Hoboken, N. J.,	3 E M W
Wu, Tsung-yu,	Washington, D. C.,	60 B S

LITT.B. SENIORS..... 49

CANDIDATES FOR THE B.S. DEGREE

Kerper, Edmund Hoffecker,	Pottstown, Pa.,	5 S W
Lane, Munson Harmon,	Ballston, Va.,	4 S R
McIlwain, George Knox,	Philadelphia, Pa.,	73 B
Reidinger, Albert Dudley,	Madison, N. J.,	9 S W
Stewart, James Harold,	Harrisburg, Pa.,	16 N E
Wilson, Julius Lane,	New York, N. Y.,	1 E M W

B.S. SENIORS..... 6

CANDIDATES FOR THE C.E. DEGREE

Foster, James Apker, Jr.,	Albany, N. Y.,	105 H
Frantz, Samuel Gibson,	Princeton, N. J.,	9 N R
Gowing, Earl Parker,	Winnetka, Ill.,	3 S D
Grant, Charles Hampson,	New York, N. Y.,	13 N D
Madden, William McKinley,	West Springfield, Mass., Princeton Preparatory School	
Matthews, Thomas Clark,	Sanibel, Fla.,	8 S R
Meirs, William Weightman,	Philadelphia, Pa.,	63 C
Sipe, Harry Aaron,	Pittsburgh, Pa.,	9 S R

C.E. SENIORS..... 8

JUNIOR CLASS, 1919

CANDIDATES FOR THE A.B. DEGREE

Amen, John Harlan,	Exeter, N. H.,	2 B C
Arrowsmith, William Walter Weed,	New York, N. Y.,	12 N W
Beckhart, Benjamin Haggott,	Denver, Colo.,	5 W M W
Campbell, James Gilmore,	Butler, Pa.,	31 '79 H
Cleveland, Richard Folsom,	Princeton, N. J.,	2 B C

Conant, Samuel Dozier,	St. Louis, Mo.,	90 Nassau St.
Cooper, Frederick Stanley,	Rome, Ga.,	24 '79 H
De Long, Charles Foley,	Philadelphia, Pa.,	12 U P
Douglas, Edward Osborn,	Troy, N. Y.,	13 '79 H
Erdman, Charles Rosenbury, Jr.,	Princeton, N. J.,	20 Library Pl.
Goldsmith, Ralph,	South Orange, N. J.,	22 L
Gray, William Steele, Jr.,	New York, N. Y.,	90 Nassau St.
Griffiths, Walter Denison,	Spuyten Duyvil, N. Y.,	19 S W
Hargest, Thomas Sewell, II,	Harrisburg, Pa.,	17 B
Haring, Norman Walter,	Lancaster, Pa.,	93 B
Hillegass, Charles Edwin, Jr.,	Red Hill, Pa.,	5 N R
Howley, John Guerin,	Pittsburgh, Pa.,	13 B
Jamison, Lemuel Foster,	Aberdeen, Md.,	13 N M R
Johnson, Archibald De Baun,	Lincoln University, Pa.,	23 S E
Kennedy, Edgar Sloan,	Lansdowne, Pa.,	22 M D
King, Donald Moore,	Pittsburgh, Pa.,	43 B
†Kinnard, Leonard Richard,	Philadelphia, Pa.,	14 N W
Kirbach, William Conrad,	Wheeling, W. Va.,	17 B
Kirkland, William Alexander,	Houston, Tex.,	90 Nassau St.
Kretschmann, Philip Miller,	Philadelphia, Pa.,	13 S M R
†Lamarche, Richard Francis,	New York, N. Y.,	9 M D
Larkin, George Brandreth,	Ossining, N. Y.,	12 '79 H
Leslie, Artemas Cameron,	Pittsburgh, Pa.,	34 '79 H
McCulloch, Duncan, Jr.,	Glencoe, Md.,	31 C
Marks, Arthur Wharton,	Hillburn, N. Y.,	2 S M R
Martin, Herbert Keller,	Nazareth, Pa.,	31 N E
Mayer, Clinton Orth, Jr.,	Philadelphia, Pa.,	62 H
Milne, John Cruickshank, II,	Fall River, Mass.,	4 W W
Norton, Paul Robinson,	Reading, Pa.,	47 N. Tulane St.
Paxton, William Miller, III,	St. Davids, Pa.,	33 '79 H
Prentiss, Theron Loveland,	Aurora, Ill.,	91 H
†Ramsay, Joseph Gales,	Guyencourt, Del.,	1 B
Rothermel, John Grim,	Reading, Pa.,	10 N W
Savidge, John Foster,	New York, N. Y.,	13 M D
Schmidt, Samuel Small,	York, Pa.,	22 H
Shaw, Albert, Jr.,	Hastings-on-Hudson, N. Y.,	12 '79 H
Siedler, Howard Duane,	Orange N. J.,	9 M D
†Sloane, Cyril,	Port Washington, N. Y.,	24 B
Smith, Guy Lincoln,	Johnson City, Tenn.,	81 B
Symons, Noel Speer,	Washington, D. C.,	31 H

† Candidate for degree in February, 1920.

Taylor, Anson Wales Hard,	New York, N. Y.,	2 U P
Van Dusen, Henry Pitney,	Philadelphia, Pa.,	22 C
Van Meter, Louis William,	Wenonah, N. J.,	18 N E
Walters, Sumner Francis Dudley,	Newark, N. J.,	46 Wiggins St.
Warren, Frank Dale, Jr.,	Plainfield, N. J.,	31 H
West, John Crawford,	Beloit, Wis.,	11 N W
Wintersteen, John,	Philadelphia, Pa.,	2 U P

A.B. JUNIORS..... 52

CANDIDATES FOR THE LITT.B. DEGREE

Alford, Kenneth Wellington,	New York, N. Y.,	33 H
Anderson, Andrew, Jr.,	St. Augustine, Fla.,	91 H
Anspach, Marshall Reid,	Milton, Pa.,	6 W M W
Aronsohn, Nathan Henry,	Paterson, N. J.,	132 H
Bade, William Henry,	Brooklyn, N. Y.,	90 Nassau St.
Baer, Harold Meyer,	Pittsburgh, Pa.,	75 H
Baker, William Reginald, Jr.,	Madison, N. J.,	44 B
Barnett, Robert Fulton,	Latrobe, Pa.,	90 Nassau St.
†Battle, George Kimball,	St. Louis Mo.,	7 L P
Bauhan, George Louis Theodore,	Jersey City, N. J.,	8 N W
Bell, William Wallace, Jr.,	Pittsburgh, Pa.,	42 '79 H
Blossom, Frederick McClure,	Peoria, Ill.,	21 '79 H
Butler, Francis David,	St. Paul, Minn.,	134 L
Carter, Frederick Brush,	Huntington, N. Y.,	9 S D
Casey, Carl Mallan,	Lynchburg, Va.	3 A, C
Clark, William Lee,	Harrisburg, Pa.,	9 A, H
Cohen, Roger Stahel,	Washington, D. C.,	41 C
Comly, Samuel Newbold,	Port Chester, N. Y.,	31 C
Comstock, Francis Adams,	South Orange, N. J.,	90 Nassau St.
Cox, Ira James,	New Salem, Pa.,	6 W M W
Cudlipp, Chandler,	Jersey City, N. J.,	
Dibrell, Edwin Richard,	Little Rock, Ark.,	61 L
Donnelly, Lochren,	St. Paul, Minn.,	7 W W
Dreyfuss, Samuel Wolf,	Pittsburgh, Pa.,	62 H
Dunn, Robert Hayes,	Philadelphia, Pa.,	20 N W
Dunn, Richard Price,	Jacksonville, Fla.,	21 '79 H
Dunn, Wadsworth Clark,	New York, N. Y.,	41 '79 H
Egner, John Edmund,	Newark, N. J.,	22 B
Fletcher, Meade	Bala, Pa.,	73 B
Frankel, George Aschheim,	Denver, Colo.,	75 H

† Candidate for degree in February, 1920.

Gardner, Edward Read,	St. Louis, Mo.,	61 C
Garrigues, William Alfred, Jr.,	Plainfield, N. J.,	104 H
Gibboney, David Clarence, Jr.,	Philadelphia, Pa.,	23 B
Goldman, Richard Silas William,	New York, N. Y.,	132 H
Gregory, Thomas Watt, Jr.,	Washington, D. C.,	34 '79 H
Guilbert, Francis Warburton,	Racine, Wis.,	23 '79 H
Haffner, William Burton,	New York, N. Y.,	23 B
Harris, Arthur Kempner,	New York, N. Y.,	66 H
Haupt, David Dean Mercer,	Abington, Pa.,	16 S M R
†Hax, William Balthaser Frederick,	Roland Park, Md.,	5 S D
Hicks, Wenman Armstrong,	Pittsburgh, Pa.,	15 C
Hill, James Pearson,	Baltimore, Md.,	90 Nassau St.
Jacobs, Elihu Arthur Samuel,	Lakewood, N. J.,	41 C
Jenkins, Alfred Elliotte,	Pittsburgh, Pa.,	104 B
Keach, Wyckoff,	Wichita, Kan.,	81 B
Keller, Harry Pardee,	Hazleton, Pa.,	13 N D
Kelley, Donald Wood,	St. Louis, Mo.,	9 A, H
Kloppenburg, William Barthold,	Jersey City, N. J.,	10 S W
Knowlson, Elms Thexton,	Detroit, Mich.,	104 B
Kuser, John Dryden,	Bernardsville, N. J.,	14 C
Luke, Donald Keith,	New York, N. Y.,	62 B
McKee, Ralph Dyer,	Bellevue, Pa.,	51 '79 H
Makepeace, Robert Fairchild,	Providence, R. I.,	13 '79 H
Mandel, David,	Perth Amboy, N. J.,	95 B
Manny, Edmund Scarritt,	St. Louis, Mo.,	34 L
Maxwell, John Courtlandt,	New York, N. Y.,	51 '79 H
Moore, Robert Grier,	Chicago, Ill.,	9 Park Place
Munsell, Elmer Ward,	Buffalo, N. Y.,	5 W M W
Nimick, William Kennedy,	Pittsburgh, Pa.,	26 C
Norton, Arthur Leigh,	New York, N. Y.,	9 M D
Orth, Paul William,	Steelton, Pa.,	15 C
Page, Lawrence Rufus,	Olean, N. Y.,	51 C
Parker, John Floyd,	New York, N. Y.,	102 B
Ralston, Joseph Vernon,	Columbus, Ohio,	11 B
Raymond, Valentine Kirk,	Brooklyn, N. Y.,	28 N E
Rich, John Baldwin,	Baltimore, Md.,	24 '79 H
Rouse, Robert Greene,	Newton, N. J.,	6 N M R
Sailer, Randolph Clothier,	Englewood, N. J.,	2 B, H
Samson, Hudson Gilmore,	Pittsburgh, Pa.,	42 '79 H
Samstag, Henry Robert,	New York, N. Y.,	21 H

† Candidate for degree in February, 1920.

Schaefer, John Louis, Jr.,	New York, N. Y.,	41 H
Self, Sydney Baldwin,	South Orange, N. J.,	305 H'm
Skinner, George Dickson,	Gouverneur, N. Y.,	6 A, C
Stoetzer, John James Brown,	Fairmont, W. Va.,	5 E W
Street, Donald MacQueen,	Chicago, Ill.,	95 B
Streichenberg, Carl Frederick Albert,	Glen Ridge, N. J.,	6 N W
Tracy, Frederick Lathrop,	Scranton, Pa.,	11 S W
Verner, Eyvind Melsom,	Oakmont, Pa.,	102 B
Ward, Clarence Arnold,	Rahway, N. J.,	51 B
Washburn, Robert Hazlett,	El Paso, Tex.,	14 E W
Wheeler, Henry Lamont, Jr.,	Roselle, N. J.,	6 A, C
Windels, Arthur Edward,	Brooklyn, N. Y.,	12 M D
Winn, John Jacob,	Mount Sterling, Ky.,	3 A, C

LITT.B. JUNIORS..... 83

CANDIDATES FOR THE B.S. DEGREE

Alyea, Edwin Paschal Dinsmore,	Clifton, N. J.,	1 S D
Barton, Henry Asken,	Detroit, Mich.,	11 H'm
Bitten, Robert Mooney,	Atlantic City, N. J.,	2 N E
Bray, Allen Richard,	Arlington Heights, Ill.,	12 M D
Cooper, Edward Nelson, Jr.,	Camp Hill, Pa.,	15 M D
Etheridge, Harry Augustus, Jr.,	Atlanta, Ga.,	43 B
Guerin, Samuel Vincent,	Asbury Park, N. J.,	5 S R
Leinbach, Luther Richard,	Wyomissing, Pa.,	5 N D
Lyman, William Clark,	Shanghai, China,	23 L
McGean, Ralph Lyman,	Cleveland, Ohio,	11 '79 H
Norris, Henry Martin,	Princeton, N. J.,	69 Alexander St.
Olmstead, Paul Smith,	Robbinsville, N. J.,	11 B
Robbins, Milton Herbert,	Hightstown, N. J.,	6 N W
Senseman, John Shaffer,	Harrisburg, Pa.,	14 M D
Snyder, Franklin Faust,	Lancaster, Pa.,	56 C
Sprague, Irvin Auchincloss, Jr.,	New York, N. Y.,	41 '79 H
Teich, Jacob,	Trenton, N. J.,	109 Market St.
Waller, Ellis Julian,	Kewanee, Ill.,	13 L
Walter, Paul Chamberlin,	Harrisburg, Pa.,	61 L
Whitman, Raymond Corwin,	Newark, N. J.,	8 N W
Wilbur, Franklin Lloyd,	Asbury Park, N. J,	5 S R

B.S. JUNIORS..... 21

CANDIDATES FOR THE C.E. DEGREE

Proctor, Lawrence Martin,	Washington, D. C.,	90 Nassau St.

Smith, Howard Malcom,	Brooklyn, N. Y.,	32 '79 H
Starr, Leopold Eidlitz,	Princeton, N. J.,	56 Bayard Lane
Whitney, William Beaumont, Jr.,	Philadelphia, Pa.,	53 '79 H
Wren, William Wood,	Frederick, Md.,	12 N W

C.E. JUNIORS..... 5

SOPHOMORE CLASS, 1920

CANDIDATES FOR THE A.B. DEGREE

Armstrong, James Newton, Jr.,	Blairstown, N. J.,	10 E M W
Baskerville, Arthur Page,	Princeton, N. J.,	15 Vandeventer Ave.
Blauvelt, Hiram Bellis,	Oradell, N. J.,	25 C
Cannon, Rudolf Austin,	Cleveland, Ohio,	4 N M R
Carrick, Charles Lynn, Jr.,	Jersey City, N. J.,	11 M D
Chappell, Walter Franklin, Jr.,	New York, N. Y.,	102 H
Chase, George Howland, 3rd,	Washington, D. C.,	131 H
Coxe, Howard Cleveland,	New York, N. Y.,	62 '79 H
Crane, Bertram Faupel,	Jersey City, N. J.,	5 A, H
Crocker, Fletcher Slee,	Elmira, N. Y.,	102 H
Drowne, Henry Russell, Jr.,	New York, N. Y.,	131 H
Eynon, George Llewellyn,	Pittsburgh, Pa.,	83 B
Fox, George Gillespie,	Philadelphia, Pa.,	14 B
Gillespie, John Porter,	Pittsburgh, Pa.,	10 L P
Gregor, Charles Russell,	Morristown, N. J.,	61 B
Hagemeyer, John Gerhard,	New York, N. Y.,	9 W W
Haigh, Thomas Devereux,	Summit, N. J.,	32 L
Harlan, John Marshall,	Chicago, Ill.,	308 H'm
Harper, George McLean, Jr.,	Princeton, N. J.,	14 S W
Harris, William Irving,	East Orange, N. J.,	74 H
Hitzrot, Lewis Haler,	McKeesport, Pa.,	6 S D
Horton, Arthur Wellington, Jr.,	Philadelphia, Pa.,	3 N E
Jackson, Sumner Allen,	Passaic, N. J.,	9 S M R
Jamison, John Martin, Jr.,	Greensburg, Pa.,	162 L
Lee, Rensselaer Wright,	Philadelphia, Pa.,	1 W M W
McAlpin, David Hunter, III,	New York, N. Y.,	2 B, H'm
††Mackey, Eric,	Trenton, N. J.,	106 H
Mapes, John Augustus, II,	New York, N. Y.,	1 S M R
Morgan, Tilgham Vickers,	Baltimore, Md.,	94 H
O'Gorman, James Aloysius, Jr.,	New York, N. Y.,	82 H
Parker, Cortlandt, III,	Washington, D. C.,	161 L

†† Candidate for degree in February, 1921.

Parrott, D'Arcy,	Princeton, N. J.,	104 Mercer St.
Pitney, Mahlon, Jr.,	Washington, D. C.,	53 C
Reed, Lawrence Conway,	New York, N. Y.,	8 L P
Rickert, Thomas Hammer,	Pottsville, Pa.,	1 E W
Ritchie, John Ritchie,	Oak Park, Ill.,	181 L
Robbins, George Appleton,	Haverford, Pa.,	1 B, H'm
Sanger, Raymond,	Princeton, N. J.,	43 Park Place
Savage, William Lyttleton,	Philadelphia, Pa.,	20 E M W
Schoedinger, Paul Siebert,	Columbus, Ohio,	20 E W
Sharpe, John McDowell, III,	Chambersburg, Pa.,	2 N D
Sichelstiel, Louis Hirsch,	Pittsburgh, Pa.,	152 L
Smith, Harrison Bowne,	Charleston, W. Va.,	14 B
Smith, Palmer, Jr.,	Covington, Tenn.,	63 '79 H
Sparhawk, Richard Dale,	Denver, Colo.,	71 B
Taylor, William Reade Kirkland, Jr.,	New York, N. Y.,	12 B
Turner, Henry Brown,	Atlanta, Ga.,	12 H'm
Walker, Hayes McClelland,	Mercersburg, Pa.,	101 L
Wilson, John Albert,	New York, N. Y.,	1 E M W
Woods, David Walker,	Lewistown, Pa.,	2 C, H'm
Wylie, Loren Luke,	Chicago, Ill.,	8 E W
Yeiser, Frederick Thiesing,	Cincinnati, Ohio,	122 H

A.B. SOPHOMORES..... 52

CANDIDATES FOR THE LITT.B. OR B.S. DEGREE

Aaron, Marcus Lester,	Pittsburgh, Pa.,	6 E W
Abbett, Sheldon,	New York, N. Y.,	65 C
Alford, Donald Cameron,	New York, N. Y.,	33 H
Anderson, Donald Camp,	Pittsburgh, Pa.,	8 C, H
Azoy, Geoffrey Velazquez,	East Orange, N. J.,	124 H
Baird, William James, Jr.,	Philadelphia, Pa.,	13 A, H
Baker, Henry Drewry,	Norfolk, Va.,	304 H
Bassett, Rice,	Denver, Colo.,	72 H
Bates, Bennett Brandenburg,	New York, N. Y.,	24 H'm
Beal, James Harvey, Jr.,	Pittsburgh, Pa.,	90 Nassau St.
Bechtel, John G.,	Carpenter, Del.,	8 B, H
Black, Edwin,	Pittsburgh, Pa.,	83 B
Blue, Robert Eugene,	Newark, N. J.,	52 L
Boyd, John Ritchie,	Washington, D. C.,	7 E M W
Brandon, Charles A.,	Auburn, Ind.,	92 B
Brock, Bertram Miller,	Arlington, N. J.,	3 U P
Brooks, Edwin James,	Baltimore, Md.,	84 H

Brooks, William Henry, Jr.,	St. Davids, Pa.,	112 L
Brown, Randolph Elijah,	Palisade, N. J.,	52 L
Bruns, Frank Wayne, Jr.,	New York, N. Y.,	111 B
Bryan, Wilhelmus Bogart, Jr.,	Washington, D. C.,	25 C
Buechner, Carl Fred, Jr.,	New York, N. Y.,	6 N D
Burke, John Logan,	Syracuse, N. Y.,	26 C
Butler, Charles Monroe,	Detroit, Mich.,	44 H
Butler, Howard Russell, Jr.,	Princeton, N. J.,	107 Library Pl.
Callery, Francis Anthony,	Pittsburgh, Pa.,	32 H
Callisen, Sterling A.,	Princeton, N. J.,	19 S M R
Cameron, Charles Ewen,	East Orange, N. J.,	6 M D
Campbell, John Gordon,	York, Pa.,	6 S D
Chamberlin, Philip Miller,	Hightstown, N. J.,	51 L
Clark, Maurice Earl,	Ridgewood, N. J.,	15 N E
Coffey, Edward Hope, Jr.,	Hackensack, N. J.,	13 N E
Cohn, Bertrand Wilson,	Brookhaven, Miss.,	14 A, H
Compton, William Randolph, Jr.,	St. Louis, Mo.,	27 C
Connelly, Harold Philip,	Elmira, N. Y.,	8 A, H
Cooke, Gordon Campbell,	Paterson, N. J.,	33 B
Cowan, John Beauregard, Jr.,	Vicksburg, Miss.,	10 A, H
††Dall, Curtis Bean,	Plainfield, N J.,	6 E M W
Dane, Nelson Breintnall,	Newark, N. J.,	72 B
Danforth, Donald,	St. Louis, Mo.,	185 L
Daniell, John Rock,	New York, N. Y.,	121 H
Dean, Prentice Northup,	Dalton, Pa.,	7 N M R
Dear, Joseph Albert, Jr.,	Jersey City, N. J.,	11 W W
Dell, George William,	Wallingford Berks, Eng.,	1 E, H'm
Demarest, Kenneth Elmer,	Jersey City, N. J.,	2 C, H
De Maris, Furman Addison, Jr.,	Camden, N. J.,	3 W M W
Dennis, John Purnell,	Preston, Md.,	63 B
Deuel, Franklin Shreve,	Maplewood, N. J.,	63 H
††Deyo, Howard Nienstedt,	New York, N. Y.,	14 '79 H
Douglas, James Henderson, Jr.,	Chicago, Ill.,	186 L
Downs, William Horatio,	Denver, Colo.,	162 L
Egner, Harold Frederick,	Newark, N. J.,	33 B
Elwood, Samuel Webster,	Decatur, Ill.,	54 '79 H
English, Gerard Montgomery,	Merion, Pa.,	2 N D
††Enos, Eric Marquand,	Fisher's Island, N. Y.,	12 B
Farr, James McCullough, III,	Wilkes Barre, Pa.,	3 E W
Fawcett, Arthur Hughes,	Plainfield, N. J.,	17 S W

†† Candidate for degree in February, 1921.

Fennelly, John Fauntleroy, Jr.,	Kansas City, Mo.,	22 L
Field, James Barker,	Denver, Colo.,	64 B
Fine, Harry Bohme,	Princeton, N. J.,	2 E W
Firestone, Harvey Samuel, Jr.,	Akron, Ohio,	A B
Flaig, Julian Vincent,	Pottsville, Pa.,	1 N D
Franz, James Norris,	Cleveland, Ohio,	12 H'm
Frey, Herman Edgar,	Terre Haute, Ind.,	29 N E
Fyffe, William Ballinger,	Highland Park, Ill.,	121 H
Garnaus, Carl Edward,	Brooklyn, N. Y.,	20 M D
Garrigues, Clarence Boyd Maxwell,	Plainfield, N. J.,	52 C
Gerstley, Henry Edward,	Philadelphia, Pa.,	63 L
Gray, Gilson Berryman, Jr.,	Aberdeen, Miss.,	10 A, H
Gray, John Harrison,	Syracuse, N. Y.,	112 B
Greenleaf, George Elton,	Plainfield, N. J.,	10 M D
Hackney, George Edgar,	Uniontown, Pa.,	74 H
Halsted, Donald Merwin,	Brooklyn, N. Y.,	42 B
Hamilton, Raymond Leslie,	Newark, N. J.,	8 C, H
Happer, Andrew Patton, III,	Ben Avon, Pa.,	12 A, H
Harris, Erdman,	Sewickley, Pa.,	131 L
Hartshorne, Richard,	Phoenixville, Pa.,	1 W M W
Haviland, Severn Teackle,	Minneapolis, Minn.,	51 H
Heath, Thomas,	Buffalo, N. Y.,	122 H
Heiserman, Robert Brown,	Sewickley, Pa.,	131 L
Hewitt, Homer Hart, Jr.,	Williamsburg, Pa.,	18 S M R
Horne, Richard Joseph,	Jersey City, N. J.,	10 N R
Houck, Lewis Daniel,	Mt. Vernon, Ohio,	44 H
Hutchins, John Mitchell,	Chicago, Ill.,	24 H'm
Hutchinson, Warren Clark,	Newark, N. J.,	2 C, H
Jacobs, John Selby, Jr.,	Youngstown, Ohio,	15 N M R
Jelliffe, Smith Ely, Jr.,	New York, N. Y.,	5 A, H
Johnson, Henry Derr,	Brooklyn, N. Y.,	21 C
Kauffmann, Samuel Hay,	Washington, D. C.,	6 N D
Kaye, Lewis Griffith,	Louisville, Ky.,	44 C
Kelsey, Clifford Tyler,	Brooklyn, N. Y.,	11 S D
Ketchum, Frederick Seymour,	East Orange, N. J.,	34 B
Koblegard, Hurst Hansen,	Clarksburg, W. Va.,	51 L
Kuser, John Louis, Jr.,	Bordentown, N. J.,	32 H
La Force, Washington Butler,	Kansas City, Mo.,	22 L
Laird, Carroll Walton,	East Orange, N. J.,	34 B
Lamont, Rogers Sullivan,	Newark, N. J.,	38 S E
Latrobe, Gamble, Jr.,	Wilmington, Del.,	84 H

Louchheim, Walter Clinton, Jr.,	New York, N. Y.,	54 B
McIlvain, Sidney Leoser,	Reading, Pa.,	54 L
Madden, Joseph McKee,	Lexington, Ky.,	82 H
Mercer, Russell Barnard,	Summit, N. J.,	18 W W
Millard, Austin Jayne,	Newton, N. J.,	32 '79 H
Miller, Armonde Kelsey,	Olean, N. Y.,	51 C
Miller, David Knight,	Mt. Vernon, N. Y.,	18 S E
Miller, Henry Keppele, Jr.,	Wilmington, Del.,	8 B, H
Miller, John Borden,	Pasadena, Cal.,	52 '79 H
Minott, Joseph Albert,	Portland, Ore.,	62 '79 H
Montgomery, James Stephens,	Trenton, N. J.,	52 C
Moore, Herbert Garton,	Philadelphia, Pa.,	111 H
Morgan, Walter Lovette,	Wilkes-Barre, Pa.,	3 A, H'm
Mossman, William Seymour,	Fort Wayne, Ind.,	72 H
O'Dea, John Baldwin,	St. Louis, Mo.,	112 L
O'Neill, John Raymond,	Brooklyn, N. Y.,	42 B
Osborne, William Hamilton, Jr.,	Seattle, Wash.,	53 B
Osmer, Gilbert Grant,	Franklin, Pa.,	3 M D
Otis, Courtlandt,	New York, N. Y.,	94 H
Page, Richard Lloyd,	Paoli, Pa.,	92 H
Parry, Joseph Saunders, Jr.,	Summit, N. J.,	92 H
Peck, Fremont Carson,	Shrewsbury, N. J.,	153 L
Peden, Allen Vernon,	Houston, Tex.,	8 N R
Peters, Thomas Darlington,	Brooklyn, N. Y.,	9 M D
Petterson, Severt Huse,	Princeton, Minn.,	96 B
††Piaget, Eugene Alexis Marie,	West Orange, N. J.,	71 H
Polhemus, Frederick Suydam,	Newark, N. J.,	44 C
Porteous, Robert Elliot,	Jersey City, N. J.,	13 W W
Powers, William L.,	Youngstown, Ohio,	63 '79 H
Pulling, Thomas John Edward,	Baltimore, Md.,	6 A, H
Purdy, Ray Foote,	Brooklyn, N. Y.,	10 E M W
Rafalsky, Richard Levyn,	New York, N. Y.,	123 H
Ransom, Julius Chalmers,	Dannemora, N. Y.,	64 L
Reed, Hugh Burgess, II,	Plainfield, N. J.,	8 U P
Reynolds, Louis Charles,	Rochester, N. Y.,	3 A, H'm
Reynolds, Philip Douglas,	Bellefonte, Pa.,	31 L
Richardson, Frank Snyder,	Bernville, Pa.,	12 S W
Rogers, Lauren Eastman,	Laurel, Miss.,	124 L
Rogers, Maurice,	Ashbourne, Pa.,	17 N W
Rosenbaum, Francis Fels,	New York, N. Y.,	123 H

†† Candidate for degree in February, 1921.

††Rothchild, Lewis Howard,	New York, N. Y.,	101 B
Sandell, Carl Victor,	Newark, N. J.,	10 S W
Sanders, Keyes Danforth,	Yonkers, N. Y.,	18 S W
Schaefer, Bernard Karsch,	New York, N Y.,	41 H
Schanck, Lawrence Maynard,	South Orange, N. J.,	10 S E
Schenck, Joseph Howard, III,	Wynnewood, Pa.,	4 W W
Schickhaus, Edward, Jr.,	Newark, N. J.,	43 H
Schroeder, Albert Henry, Jr.,	Suffern, N. Y.,	13 C
Schroeder, Jay Nevin, Jr.,	Lancaster, Pa.,	31 L
Schumann, Emil William Albert,	Jersey City, N. J.,	2 M D
Schuster, Carl Edward,	Cleveland, Ohio,	181 L
Sherman, Robert Trowbridge,	Evanston, Ill.,	A B
Sibley, George Hayden,	Denver, Colo.,	71 B
Smith, Murray Davidson,	Princeton, N. J.,	16 Dickinson St.
Speir, Robert Wade, Jr.,	Valier, Mont.,	308 H'm
Squier, Frederick Craig, Jr.,	Rahway, N. J.,	90 Nassau St.
Stachelberg, Charles Grant,	New York, N. Y.,	54 B
Stewart, Sidney Andrew,	Pittsburgh, Pa.,	94 B
Stewart, Walter Blair,	Atlantic City, N. J.,	3 W M W
Stricker, James Best,	Minneapolis, Minn.,	51 H
Swaney, Dexter Preston,	Westfield, N. J.,	14 '79 H
Taylor, Heinrich Clay,	Bloomfield, Iowa,	11 '79 H
††Taylor, Livingston Lodge,	Columbus, Ohio,	2 S E
Thompson, Wallace Miller,	Pittsburgh, Pa.,	2 B
Thurman, Livingston Ray,	Springfield, Ky.,	92 B
Townley, Philip Beardsley,	Newark, N. J.,	43 H
Townsend, Roger Corning,	Orange, N. J.,	2 M D
Trimble, Robert Maurice, Jr.,	Ben Avon, Pa.,	12 A, H
Twitchell, Hanford Mead,	New York, N. Y.,	41 B
Van Alen, Ambrose Henderson,	Rutledge, Pa.,	1 W W
††Vogt, Alvin Robert,	Louisville, Ky.,	52 '79 H
Wanless, Harold Rollin,	Chicago, Ill.,	1 D, H'm
Ward, Lot Reznor, Jr.,	Ocean Grove, N. J.,	111 H
Watts, Benjamin Franklin, Jr.,	Leesburg, Fla.,	2 B
Wells, William Gates,	Platte City, Mo.,	46 Wiggins St.
White, Thomas Gay,	Quincy, Ill.,	4 S E
Williamson, George Franklin,	Minneapolis, Minn.,	4 A, C
Williamson, Ward Meeker,	Brooklyn, N. Y.,	66 Nassau St.
Wilmot, Willis Gilbert,	New Orleans, La.,	27 C
Wilson, Kenneth Orr,	Binghamton, N. Y.,	11 S D

†† Candidate for degree in February, 1921.

Witherspoon, John Barkley,	New Orleans, La.,	64 L
Wolf, Elias,	Elkins Park, Pa.,	3 S E
Woodworth, Robert Cushman,	Minneapolis, Minn.,	96 B
Worden, John Sartwell,	Olean, N. Y.,	55 C

LITT.B. AND B.S. SOPHOMORES....182

CANDIDATES FOR THE C.E. DEGREE

Cotton, John Patterson,	Hurdsfield, N. D.,	53 B
Dodd, Samuel Thompson, Jr.,	Schenectady, N. Y.,	20 S E
Donner, Carl Hermann,	Summit, N. J.,	24 B
Elgin, Charles Porter,	Columbus, Ohio,	5 N W
Fisher, Evan Thomas,	Philadelphia, Pa.,	172 L
Fringer, David Lewis Bartlett,	Pikesville, Md.,	8 S M R
Georgi, Carl Herbert,	Nyack, N. Y.,	72 B
Hubbell, Edward Springer,	Syracuse, N. Y.,	3 S M R
Johnson, Walter Frank,	Greenwich, Conn.,	10 S R
Lawrence, George Allen,	Portland, Ore.,	3 B, H
Linthicum, Alexander Wilson,	Portland, Ore.,	23 C
Marks, Joseph,	Greenwich, Conn.,	10 S R
Mather, William Malcolm,	New York, N. Y.,	4 A, C
Moore, Milton Darlington,	Avondale, Pa.,	9 N D
Plough, David Henry, Jr.,	Brooklyn, N. Y.,	101 L
Raleigh, Thomas Leicester,	Syracuse, N. Y.,	5 N W
Vehslage, Frank Clinton,	Newark, N. J.,	3 B, H
Vermeule, Warren Carpenter,	East Orange, N. J.,	71 H

C.E. SOPHOMORES..... 18

FRESHMAN CLASS

CANDIDATES FOR THE A.B. DEGREE

Alexander, Douglas Hamilton,	New York, N. Y.,	164 L
Atkinson, Cedric Underhill,	Upper Montclair, N. J.,	12 S M R
Baird, Charles Hendrickson,	Philadelphia, Pa.,	13 A, H
Barclay, William Lyttleton, Jr.,	Philadelphia, Pa.,	4 E M W
Barringer, Brandon,	Haverford, Pa.,	32 C
Bryan, George Plumer,	Chicago, Ill.,	21 M D
Carpenter, Charles Colcock Jones,	Augusta, Ga.,	24 Dickinson St.
Carson, Joseph, Jr.,	New York, N. Y.,	12 W W
Carter, Weld Saunders,	East Orange, N. J.,	42 S E
Chapin, Charles Merrill, Jr.,	New York, N. Y.,	33 C
Chisholm, Henry Lawrence,	Morristown, N. J.,	24 L

Collins, Seward Bishop,	New York, N. Y.,	16 B
Comstock, George Carlton, Jr.,	New York, N. Y.,	115 B
Creasey, Stephen Brearley,	Princeton, N. J.,	24 Dickinson St.
Crouse, Cecil Idell,	Philadelphia, Pa.,	10 N M R
Dabney, Lewis Meriwether, Jr.,	Dallas, Tex.,	9 N W
Dater, John Young, Jr.,	Ramsey, N. J.,	2 A, C
Davis, Philip Haldane,	Princeton, N. J.,	58 Mercer St.
Denny, Collins, Jr.,	Richmond, Va.,	5 A, C
Dixon, Jean Paul,	Cochranville, Pa.,	6 S M R
Ehret, Richard Michael,	Philadelphia, Pa.,	52 H
Ewing, Thomas Davis,	Portland, Ore.,	21 S E
Fawcett, John Hewlett,	Middletown, N. J.,	32 S E
Fleming, Matthew Corry, Jr.,	New York, N. Y.,	76 H
Flinn, Irvine Moore, Jr.,	Wilmington, Del.,	133 L
Foster, Case Alexander,	Carnegie, Pa.,	29 S E
Foster, Reginald Hayden,	New York, N. Y.,	9 B
Gilfillan, John,	Pittsburgh, Pa.,	82 B
Gotshalk, William Calvin, 3rd,	Trenton, N. J.,	40 N E
Govin, Ralf Ramond, Jr.,	New York, N. Y.,	76 H
Greenlee, Wendell William,	Amherst, N. H.,	17 S M R
Hale, Chandler, Jr.,	Harrisburg, Pa.,	12 S E
Hamilton, William Herbert, Jr.,	New York, N. Y.,	151 L
Helliwell, Charles Harold,	Rural Valley, Pa.,	40 S E
Helm, Harold,	Los Angeles, Cal.,	97 B
Hunter, George Richard,	Elgin, Ill.,	22 H'm
Illingworth, Ralph Walshaw,	State College, Pa.,	20 N E
Irwin, Samuel Browning,	Lansdowne, Pa.	8 E W
Jeffers, George Smyser,	Harrisburg, Pa.,	72 L
Kessinger, Frederick Everiss,	Rome, N. Y.,	63 H
Kilby, Thomas Erby, Jr.,	Anniston, Ala.,	7 B, H
Klipstein, Kenneth Hampton,	East Orange, N. J.,	19 M D
Leggett, Herbert Adolph,	Lemmon, S. D.,	32 Mercer St.
Lewis, Edward Parke Curtis,	New York, N Y.,	114 H
Lewis, John Folton, Jr.,	Valdosta, Ga.,	111 L
Lindabury, Richard Vliet, Jr.,	Bernardsville, N. J.,	24 C
Loose, Alan Spangler,	Mauch Chunk, Pa.,	26 N D
Lynch, John Howard, Jr.,	Harrisburg, Pa.,	17 S E
McCarter, Thomas Nesbitt, Jr.,	Rumson, N. J.,	11 C
MacColl, Alexander Meredith,	Philadelphia, Pa.,	61 C
McCormick, Harold Fowler, Jr.,	Chicago, Ill.,	24 Dickinson St.
McKinnon, Hugh Deane,	Chicago, Ill.,	17 M D

McLaughlin, Robert William, Jr.,	Brooklyn, N. Y.,	13 S E
MacLeod, Henry Blakeley,	New York, N. Y.,	18 E W
McWilliams, Douglas Edmund,	Shamokin, Pa.,	142 L
Magonigle, Gaynor Beekman,	New York, N. Y.,	53 L
Matthews, Harrison Freeman,	Baltimore, Md.,	7 W M W
Mayo, Charles William,	Rochester, Minn.,	6 A, H
Merrifield, Richard Earl,	New York, N. Y.,	16 E W
Metzger, Rowland South,	Salem, Ohio,	26 M D
Meyer, Edward Bailey,	Evanston, Ill.,	12 H
Miller, Kenneth Byron,	Westfield, N. J.,	11 S E
Miller, Robert Murdoch,	Plainfield, N. J.,	4 A, H
Mish, Joseph Dubbs,	Hagerstown, Md.,	141 H
Molloy, Charles Joseph,	Brooklyn, N. Y.,	27 N E
Moore, David Dodge,	New York, N. Y.,	35 N E
Myers, Darwood Gillespie,	New York, N. Y.,	1 C, H'm
Paddock, Benjamin Henry,	Detroit, Mich.,	11 A, H
Paddock, Thomas Ferguson,	Detroit, Mich.,	11 A, H
Page, Edward Sydenham, Jr.,	Devon, Pa.,	112 H
Penfield, Thornton Bancroft, Jr.,	Englewood, N. J.,	38 L
Pershing, John,	Denver, Colo.,	4 A, H
Rahn, Earl Fox,	Schwenkville, Pa.,	36 N E
Ramee, Arthur Randolph,	Hackensack, N. J.,	4 M D
Red, William Stuart, Jr.,	Mexia, Tex.,	19 N W
Reichner, Aiken,	Philadelphia, Pa.,	112 H
Rhodes, Charles Elbert, Jr.,	Buffalo, N. Y.,	11 N E
Rhodes, Robert Peebles,	Pittsburgh, Pa.,	9 U P
Russell, Roswell Philip,	Baltimore, Md.,	68 L
Ryan, John Roselle Tucker, 2nd,	Indianapolis, Ind.,	7 N D
Sloan, Alexander Notman, Jr.,	Ontario, Can.,	19 N E
Speers, Theodore Cuyler,	New York, N. Y.,	113 H
Stein, Edward Thomas,	Reading, Pa	10 W M W
Stillwell, Richard,	New York, N. Y.,	62 C
Strong, William McCreery,	Baltimore, Md.,	7 W M W
Tappen, Irwin Logan,	Jersey City, N. J.,	18 M D
Todd, Rodwell,	Millburn, N. J.,	24 Dickinson St.
Trowbridge, Cornelius Polhemus,	Princeton, N. J.,	28 C
Walley, Harold Reinoehl,	Reading, Pa.,	10 W M W
Walsh, William James,	Newark, N. J.,	19 N D
Webster, Archibald Wilson,	Xenia Ohio,	6 S W
Webster, Edwin Hanson,	Bel Air, Md.,	132 L
White, Erskine Norman,	New York, N. Y.,	306 H'm

Wisner, Herbert Lawrence,	New York, N. Y.,	111 L
Wood, Clinton Tyler, Jr.,	Wooster, Ohio,	3 S R
Wood, Horace Nixon Elmer,	Philadelphia, Pa.,	46 L

A.B. FRESHMEN..... 96

CANDIDATES FOR THE LITT.B. OR B.S. DEGREE

Allison, James,	Beaver, Pa.,	14 S M R
Anderson, George Carl Arvid,	Waynesboro, Pa.,	11 N D
Baker, Walter Browne,	Houston, Tex.,	113 H
Barbee, Edward Lowry,	Little Rock, Ark.,	311 H'm
Barringer, Daniel Moreau, Jr.,	Haverford, Pa.,	32 C
Bartow, Tyler McKim,	Montclair, N. J.,	4 W M W
Batt, Lewis Theodore,	South Orange, N. J.,	17 N E
Benua, William Ellsbury,	Columbus, Ohio,	33 L
Benson, Julius M.,	Jefferson, Ohio,	7 N E
Berry, George Packer,	Englewood, N. J.,	16 B
Bird, Wallis Clinton,	New York, N. Y.,	301 H'm
Bluntschli, Robert William,	Paterson, N. J.,	114 B
Bolton, William, Jr.,	Troy, N. Y.,	74 B
Boteler, Elijah Smith, Jr.,	New York, N. Y.,	15 Univ. Pl.
Bowman, Francis Bartow,	New York, N. Y.,	15 S D
Brandt, Rodney Lee,	Baltimore, Md.,	28 S E
Brawner, Alexander Harrison, Jr.,	New York, N. Y.,	16 H'm
Brewster, Benjamin Harris, 3rd,	Baltimore, Md.,	81 H
Brown, Benjamin Nields,	Wilmington, Del.,	122 L
Brown, Harold Leonard,	Yonkers, N. Y.,	18 N W
Brush, John Mitchell,	Brooklyn, N. Y.,	91 B
Bryan, Julien Hequembough,	Titusville, Pa.,	65 B
Bucknall, Bertram Corfield,	Glen Cove, N. Y.,	90 Nassau St.
Burns, Lloyd Spencer,	Brooklyn, N. Y.,	91 B
Bushnell, Asa Smith,	Springfield, Ohio,	64 H
Butcher, Alexander Stults,	Cranbury, N. J.,	25 N E
Buterbaugh, Dean Royden,	Latrobe, Pa.,	82 B
Callahan, Henry Augustine,	Lawrence, Mass.,	48 B S
Campbell, Herbert Sumner,	New York, N. Y.,	12 N M R
Campbell, John Robert, Jr.,	Detroit, Mich.,	16 S E
Carey, Andrew Galbraith,	Baltimore, Md.,	81 H
Chapman, Frank Michler, Jr.,	Englewood, N. J.,	14 N D
Churchill, George King,	New York, N. Y.,	151 L
Cisco-Smith, Gill,	New York, N. Y.,	15 S D
Cochran, John Lewis, Jr.,	Chicago, Ill.,	7 N D

Colwell, Edward Townsend,	Cazenovia, N. Y.,	13 N E
Conner, James,	Charleston, S. C.,	11 N D
Cooper, Joseph Walter, Jr.,	Philadelphia, Pa.,	24 Dickinson St.
Corbett, Frank Thornton,	New York, N. Y.,	16 H'm
Cossum, Robert Wilder,	Chicago, Ill.,	14 N M R
Cover, Loring Andrews, Jr.,	Baltimore, Md.,	8 W M W
Cowan, Percy Bertine,	Glen Cove, N. Y.,	16 N W
Crabtree, Edwin Martin,	New York, N. Y.,	42 L
Craig, George Liggett, Jr.,	Pittsburgh, Pa.,	154 L
Croll, Joseph Dennehy,	New York, N. Y.,	134 H
Cumings, Wells Bradley,	New York, N. Y.,	103 H
Curtiss, John Shelton,	Buffalo, N. Y.,	8 M D
Davis, Arthur Paul,	Waterbury, Conn.,	74 B
Davis, John Ethelbert,	New York, N. Y.,	5 M D
Dean, Junius Simpson,	Rome, Ga.,	2 W M W
Denniston, Robert, Jr.,	Dobbs Ferry, N. Y.,	15 N W
Depue, Sherrerd,	Newark, N. J.,	2 A, H'm
Dew, Walter Arthur,	Princeton, N. J.,	8 N E
Donohue, Frank M., Jr.,	New Brunswick, N. J.,	143 L
Driscoll, Hugh McPherson,	Grand Rapids, Mich.,	41 N E
Dulles, Foster Rhea,	New York, N. Y.,	28 C
Dunn, Arthur, Jr.,	Quincy, Ill.,	19 Bank St.
Eagle, James Philip,	Little Rock, Ark.,	66 L
English, William Hamilton, Jr.,	New York, N. Y.,	153 L
Evans, John Pfaff,	Wyoming, Ohio,	34 S E
Fagan, Arthur Lawrence,	Hoboken, N. J.,	142 L
Farr, William Rush,	West Orange, N. J.,	13 S W
Fink, Henry,	Harrisburg, Pa.,	141 H
Finney, George Gross,	Baltimore, Md.,	54 H
Fisher, Howard Ritchie,	Pittsburgh, Pa.,	24 S E
Folmer, Walter Frederic,	Rochester, N. Y.,	102 B
Forbes, Robert Laton,	Weston, Mass.,	24 Dickinson St.
Foresman, Donald Blair,	Ridley Park, Pa.,	21 N E
Freer, William Bradford,	Hindsdale, Ill.,	90 Nassau St.
Furness, George Wood,	Jenkintown, Pa.	25 M D
Gaffney, Harry Burrows,	Bradford, Pa.,	14 W W
Garrett, Jesse Hurt,	Washington, D. C.,	14 S D
Garvey, Clifford Pendleton, Jr.,	Cincinnati, Ohio,	7 B, H
Gilbert, Clinton, Jr.,	New York, N. Y.,	134 H
Gray, David Sturgeon,	Columbus, Ohio,	111 L
Groel, Frederick Henry,	Princeton N. J.,	35 William St.

Haight, Richard Allen,	New York, N. Y.,	16 M D
Haines, Charles Huston,	Philadelphia, Pa.,	10 S D
Hall, Stuart Eldridge,	New York, N. Y.,	3 W W
Halliburton, Richard,	Memphis, Tenn.,	32 B
Halsey, Charles Day, Jr.,	Seabright, N. J.,	65 H
Harth, Henry Charles Philip,	Trenton, N. J.,	2 W W
Hawke, William Bartles,	Flemington, N. J.,	2 E M W
Henderson, Branton Holstein,	New Castle, Pa.,	6 B
Herndon, Edward Tarr,	Pottsville, Pa.,	38 L
Herzog, Edwin Harvey,	Albany, N. Y.,	18 L
Hockaday, Irvine Oty, 3rd,	Kansas City, Mo.,	13 E W
Hoge, Frank Evans,	New York, N. Y.,	15 N W
Hopkins, David Luke,	Baltimore, Md.,	62 B
Hopkins, John Livingston,	Atlanta, Ga.,	4 W M W
Hopkinson, Russell,	New York, N. Y.,	3 W W
Hughes, William,	Rome, N. Y.,	8 S E
Irons, Henry Clay, Jr.,	Plainfield, N. J.,	54 L
Jennings, Prescott,	Cambridge, Mass.,	97 B
Johnson, Wharton, Vail,	Newark, N. J.,	84 B
Kassler, Charles Moffat, Jr.,	Denver, Colo.,	9 B
Kazanjian, Andon,	New Rochelle, N. Y., 24 Dickinson St.	
Kelley, McClure,	Washington, D. C.,	14 N E
Kelly, Edmund Bredow,	Baltimore, Md.,	68 L
Kelsey, Allison Fuller,	Montclair, N. J.,	98 B
Kennedy, Paul Edgar,	Youngstown, Ohio,	10 S D
Kent, Ralph Edward,	Rome, N. Y.,	7 S E
Kerr, Charles Matthew, Jr.,	York, Pa.,	26 S E
Keyes, Edward Lawrence, 3rd,	New York, N. Y.,	2 S D
King, Richard Bruce,	Washington, D. C.,	11 E W
Knox, Alan Gordan,	New York, N. Y.,	4 L P
Labouisse, John Witherspoon,	New Orleans, La.,	13 N W
Lawrence, Reginald Norcom,	Brooklyn, N. Y.,	5 S E
Leavitt, Robert McDowell,	Wooster, Ohio,	15 W W
Leh, John Henry,	Allentown, Pa.,	66 L
Lincoln, Frederic Walker, Jr.,	Greenwich, Conn.,	24 L
Litch, Robert Brodhead,	Upper Montclair, N. J.,	8 N M R
Littleton, Douglas Marshall,	New York, N. Y.,	182 L
Littleton, Martin Wilson,	New York, N. Y.,	182 L
Luft, Charles August,	Condersport, Pa.,	17 W W
McAlpin, Benjamin Brandreth, Jr.,	New York, N. Y.,	65 H
McCaull, John Dinsmore,	Minneapolis, Minn.,	2 E M W

McCormack, Alfred,	Brooklyn, N. Y.,	7 S M R
McCulloch, Robert Manning,	Tenafly, N. J.,	1 S E
McCulloh, Gordon,	New York, N. Y.,	5 M D
McDonnell, James Smith, Jr.,	Altheimer, Ark.,	311 H'm
Macfarlane, Jesse Fletcher,	Pittsburgh, Pa.,	35 L
Mahaffy, Rodmond Smith,	Wilmington, Del.,	53 L
Margetts, Herbert Stanley,	Arlington, N. J.,	1 A, H
Mead, Varnum Cleveland,	Arlington, Mass.,	16 C
Meyer, Morton Morris,	Pittsburgh, Pa.,	12 S D
Miller, Lloyd Samuel,	Bound Brook, N. J.,	143 L
Mills, William Birney,	Coshocton, Ohio,	3 S R
Milne, Walter Keith,	Roslyn, Md.,	13 B S
Morgan, John Ainsworth,	San Francisco, Cal.,	90 Nassau St.
Mount, Elston Cuyler,	New Brunswick, N. J.,	23 Bank St.
Mulford, Arthur Harrison, Jr.,	Oak Park, Ill.,	72 L
Munford, Beverley Bland,	Richmond, Va.,	5 A, C
Murray, Gilbert Donald, Jr.,	Scranton, Pa.,	61 H
Neher, John Hutchins,	Princeton, N. J.,	14 S D
Norris, Henry Stuart,	Terre Haute, Ind.,	15 S W
Opie, Howard Reinoehl,	Pittsburgh, Pa.,	15 S E
Osborne, Robert Russell,	Brooklyn, N. Y.,	23 L
Palmer, Robert Sterling,	Columbus, Ohio,	24 M D
Parrott, Lindesay Marc,	Princeton, N. J.,	70 S W
Penney, Truman Colman,	Minneapolis, Minn.,	300 H'm
Perry, Edward Ritzema,	Shrewsbury, N. J.,	142 H
Pike, Crozier Leslie,	Orange, N. J.,	21 M D
Piper, George Shotwell,	New York, N. Y.,	16 M D
Pope, James Noble,	Jersey City, N. J.,	84 B
Rabinowitz, Samuel Mordecai,	19 Union St., Trenton, N. J.	
Rawlings, Junius Mott,	El Paso, Texas,	15 N D
Raymond, Richard Valentine,	Brooklyn, N. Y.,	28 N E
Reimer, Otto Berend,	Richmond Hill, N. Y.,	114 H
Rhodes, John Bower,	Pittsburgh, Pa.,	41 L
Richardson, Hallam Maxon,	Brooklyn, N. Y.,	44 L
Richardson, Hubert Townsend,	Passaic, N. J.,	34 N E
Roberts, Thomas Chambers,	Titusville, Pa.,	65 B
Robinson, William Byron,	Akron, Ohio,	35 L
Rogers, William, Jr.,	Ashbourne, Pa.,	17 N W
Rothschild, Howard Frank,	Brooklyn, N. Y.,	101 H
Rubel, August Alexander,	New York, N. Y.,	8 E W
Russell, John, Jr.,	Ashland, Ky.,	16 C

Russell, John Ewing,	Pittsburgh, Pa.,	5 U P
Ruth, Richard Bowman,	Lebanon, Pa.,	2 D, H
St. John, Charles Edmund,	Bristol, Tenn.,	19 N W
Scarborough, Harvey Miller,	132 Hanover St.,	Trenton, N. J.
Schabacker, Richard Wallace,	Erie, Pa.,	12 N E
Scheerer, Joseph Durand,	East Orange, N. J.,	73 H
Schirmer, Robert,	New York, N. Y.,	3 B
Scribner, Charles Hosmer, Jr.,	Paterson, N. J.,	13 M D
Scureman, Murray Smith,	Dorranceton, Pa.,	19 W W
Seiberling, James Penfield,	Akron, Ohio,	2 S D
Sharp, Eugene Webster,	Woodward, Okla.,	8 E M W
Shaw, Lauren Elwood,	Brooklyn, N. Y.,	30 S E
Shea, Sidney Morgan,	Pittsburgh, Pa.,	22 H'm
Sheward, Caleb Mercer, Jr.,	Wilmington, Del.,	122 L
Silzer, Parker Waite,	Metuchen, N. J.,	24 Dickinson St.
Skidmore, James Bond,	Summit, N. J.,	1 N E
Skinner, Charles Edward, Jr.,	Wilkinsburg, Pa.,	12 N D
Slocum, Lorimer Bergland,	Yonkers, N. Y.,	10 N E
Smalley, Charles Sydney,	Rocky Hill, N. J.,	Rocky Hill, N. J.
Smith, Elsworth Fayssoux,	St. Louis, Mo.,	38 N E
Smith, Henry Bertram, Jr.,	New York, N. Y.,	10 U P
Stewart, Paul Wellington,	Newark, N. J.,	42 H
Streetman, William McIver,	Houston, Tex.,	116 B
Stull, Arthur,	Wilkes-Barre, Pa.,	15 E W
Sutphen, Preston Lees,	New York, N. Y.,	142 H
Sweet, Channing Fullerton,	Denver, Colo.,	32 B
Tarbox, Hugh Bogart,	Toronto, Can.,	90 Nassau St.
Taylor, Oliver Forrester,	Morristown, N. J.,	53 H
Thach, William Thomas,	Lake Placid, N. Y.,	143 H
Thomas, Newell Elliott,	Pittsburgh, Pa.,	5 S M R
Todd, Wallingford,	New York, N. Y.,	24 Dickinson St.
Tompkins, Ralph Lewis,	Newburgh, N. Y.,	10 Madison St.
Townsend, Winfield Scott,	Denver, Colo.,	121 L
Turnbull, Phillips Roome,	Montclair, N. J.,	73 H
Turnure, David Arthur,	New York, N. Y.,	172 L
Uebelacker, David Adams,	Hackensack, N. J.,	123 L
Upson, Robert James,	Mansfield, Ohio,	23 N E
Urmy, Thomas Van Orden,	Newark, N. J.,	7 S W
Vermillion, James Galbraith,	Youngstown, Ohio,	14 U P
Vernon, Miles Hodsdon,	New York, N. Y.,	4 E W
Wallace, James Macaulay,	Philadelphia, Pa.,	171 L

Wallis, Philip,	Altoona, Pa.,	54 H
Watts, Edward Everett, Jr.,	New York, N. Y.,	24 Dickinson St.
Webb, Burton Mallory,	Orange, N. J.,	42 H
Weishaar, Emmanuel Adam,	Williamsport, Pa.,	32 N E
Welles, Henry Hunter, 3rd,	Wilkes-Barre, Pa.,	98 B
Welsh, Samuel,	Philadelphia, Pa.,	103 H
Werner, Joseph Louis,	St. Louis, Mo.,	143 H
Westgate, Theodore Heath,	Titusville, Pa.,	10 N D
Wheelwright, Philip Ellis,	Elizabeth, N. J.,	37 S E
Whelen, John Howard, Jr.,	Philadelphia, Pa.,	52 H
White, Francis Parker,	Brookline, Mass.,	18 N W
White, Scott Alexander, Jr.,	Pittsburgh, Pa.,	41 L
Wilcox, Allan Dudley,	Bloomfield, N. J.,	22 S E
Williams, Barent Waldron,	Rye, N. Y.,	115 B
Williams, Coleman Hawley,	New York, N. Y.,	53 H
Wilson, Henry Symmes,	Cranbury, N. J.,	307 H'm
Witherill, Lawrence Liston,	Syracuse, N. Y.,	36 L
Wood, Arnold, Jr.,	New York, N Y.,	6 B
Woodworth, Benjamin Snow,	Minneapolis, Minn.,	300 H'm
Woolworth, Richard Wesley,	Scranton, Pa.,	21 H
Wright, William A. Stone,	Ben Avon, Pa.,	309 H'm

LITT.B. AND B.S. FRESHMEN.....220

CANDIDATES FOR THE C.E. DEGREE

Ball, Raymond Clift,	Brooklyn, N. Y.,	12 H
Bell, Alexander Brown,	Portland, Ore.,	2 W M W
Benedict, Thomas Harold,	Wellesley, Mass.,	37 N E
Billings, Chester,	Newark, N. J.,	64 H
Blackwell, Francis Ogden, Jr.,	Englewood, N. J.,	309 H'm
Brown, Edward Long,	New York, N. Y.,	171 L
Clarke, Alfred Hyde,	Pleasantville, N. Y.,	9 E W
Conover, Alonzo Edward, Jr.,	New York, N. Y.,	35 S E
Cook, Elmer Earnshaw,	Towson, Md.,	121 L
Curtis, Gordon Heys,	Elmira, N. Y.,	64 C
Farr, Harry Andrews,	Princeton, N. J.,	42 Wiggins St.
Fleming, Herbert Richard,	New Brunswick, N. J.,	27 S E
Grandin, Frank Samuel,	Tidioute, Pa.,	10 N D
Greey, Elmer Bloomfield,	Princeton, N. J.,	R. F. D. No. 3
Hansen, Eigil Lund,	Bergen, Norway,	106 Nassau St.
Harvey, Harold Austin,	Cambridge, Mass.,	56 B S
Hornsey, John William, Jr.,	Summit, N. J.,	10 W W

Hungerford, Clark,	Charlotte, N. C.,	5 B
Jacobs, Arthur Branan,	Boston, Mass.,	33 S E
Keck, James Stanton,	Greensburg, Pa.,	7 N E
Knowles, Nathaniel, Jr.,	Philadelphia, Pa.,	4 E M W
Kopp, Edward Charles, Jr.,	Princeton, N. J.,	35 Park Pl.
Lynch, Joseph Glindon,	Endeavor, Pa.,	7 N E
McGraw, Donald,	New York, N. Y.,	51 B
Martin, Ellis Hughes,	Rockford, Ill.,	42 L
Matthews, Watt Reynolds,	Albany, Tex.,	15 N D
Morris, Howard Allen,	Brooklyn, N. Y.,	4 U P
Murray, James Walter,	Princeton, N. J.,	107 Mercer St.
Schafer, Myron Lewis,	New York, N. Y.,	7 B
Shipway, Warren Butler,	New York, N. Y.,	123 L
Tramel, James Henry Forsyth,	Chicago, Ill.,	132 L

C.E. FRESHMEN..... 31

STUDENTS QUALIFYING FOR REGULAR STANDING

Barnes, Baron Salisbury,	Colorado Springs, Colo.,	298 Nassau St.
Bauerschmidt, George William,	Baltimore, Md.,	6 E M W
Davies, John Archibald, V,	Salt Lake City, Utah,	39 N E
Decker, Charles Smith,	New York, N. Y.,	11 H'm
Geissinger, Morris Newton,	Stroudsburg, Pa.,	4 N R
Griggs, Earl Leslie,	Spuyten Duyvil, N. Y.,	19 S W
Hall, Robert Hayes,	Kane, Pa.,	312 H'm
Henderson, Robert Heffner,	Huntingdon, Pa.,	6 W W
Hynson, James Nelson,	Lebanon, Pa.,	2 D, H
Jacobs, William States, Jr.,	Houston, Tex.,	8 N R
Kalt, Harold Leslie,	New York, N. Y.,	33 '79 H
Kurth, Edward Houghton,	Schenectady, N. Y.,	19 S E
Lineaweaver, Thomas Harbaugh,	Lebanon, Pa.,	64 '79 H
McCune, George,	Grove City, Pa.,	312 H'm
Martin, Frederick Eastman,	Colebrook, N. H.,	7 S D
Matlock, Woodford Absalom, Jr.,	Denver, Colo.,	64 B
Mead, Arthur Ferguson,	Newark, N. J.,	14 S D
Newton, Oscar, Jr.,	Jackson, Miss.,	15 University Pl.
Rentschler, Peter Earl,	Hamilton, Ohio,	124 H
Requa, Isaac, Jr.,	Tarrytown, N. Y.,	2 L P
Rutledge, Winston Underwood,	Anchorage, Ky.,	3 C, H
Schroeder, Lyra Schweke,	St. Louis, Mo.,	7 L P
Shelton, Elbert Miller,	Statesville, N. C.,	44 B

Sloan, James Sterett,	Lutherville, Md.,	54 '79 H
Stevens, Lewis Miller,	Meriden, Conn.,	1 M D
Stuart, Lewis Batchelder,	St. Louis, Mo.,	185 L
Welch, James Whitcomb,	Nicholasville, Ky.,	16 W W
Wood, Thomas John, 2nd,	Louisville, Ky.,	3 C, H'm
Worley, John Groves,	Cadiz, Ohio,	30 N E
Young, Robert Bruce, Jr.,	Fort Worth, Tex.,	19 Bank St.

STUDENTS QUALIFYING FOR REGULAR STANDING....31

SPECIAL STUDENTS

NOT CANDIDATES FOR A DEGREE

Gaver, William Urner,	Frederick, Md.,	2 B
Strubing, John Kelley, Jr.,	Philadelphia, Pa.,	163 L
Studdiford, William Emery, Jr.,	New York, N. Y.,	53 '79 H

SPECIAL STUDENTS..... 3

STUDENTS PURSUING PARTIAL COURSES

Aoyoshi, Katsuhisa,	Tokio, Japan,	44 B S
Barnhouse, Donald Grey,	Los Angeles, Cal.,	35 A S
Chandler, Horace Edward,	Princeton, N. J.,	51 Aiken Ave.
Closson, James Harwood,	Germantown, Pa.,	13 B
Cooper, William Prentice, Jr.,	Shelbyville, Tenn.,	142 G C
Gould, Aylmer Brooks,	Hoshiaspur, Punjab, India,	33 B S
Iwasaki, Shintaro,	Osaka, Japan,	3 B S
Morrow, Glenn Raymond,	Crane, Mo.,	208 H S
Speers, William Ewing,	Montclair, N. J.,	Montclair, N. J.
Sullivan, J. Francis,	Princeton, N. J.,	48 Charlton St.
Woltz, Russell Harrison,	Hamden, Ohio,	103 H S

STUDENTS PURSUING PARTIAL COURSES.... 11

GENERAL SUMMARY

Officers of Instruction and Administration

Trustees,	31	
Faculty and Instructors,	184	
Assistants in Instruction,	5	
Officers of Administration,	15	
		235

Students

Graduate School		
Fellows,	19	
Graduate Scholars,	1	
Students on Full Time,	15	
Students on Part Time,	39	
		74
School of Electrical Engineering		
Second Year,	0	
First Year,	0	
		0
Undergraduates		
Senior Class		
A.B.,	31	
Litt.B.,	49	
B.S.,	6	
C.E.,	8	
		94
Junior Class		
A.B.,	52	
Litt.B.,	83	
B.S.,	21	
C.E.,	5	
		161
Forward		329

Brought forward		329
Sophomore Class		
A.B.,	52	
Litt.B. and B.S.,	182	
C.E.,	18	
		252
Freshman Class		
A.B.,	96	
Litt.B. and B.S.,	220	
C.E.,	31	
		347
Students Qualifying for Regular Standing,		30
Special Students,		3
Students Pursuing Partial Courses,		11
Total for the year 1917-1918		972

SUMMARY OF STUDENTS BY STATES

	G.	E.E.	Sr.	Jr.	So.	Fr.	Q.	Sp.	Par.	Total
New York	7	0	22	33	55	97	5	1	0	220
Pennsylvania	17	0	20	47	49	71	6	1	1	212
New Jersey	7	0	19	32	66	70	1	0	3	198
Ohio	1	0	2	2	11	17	2	0	1	36
Illinois	1	0	5	6	10	12	0	0	0	34
Maryland	2	0	0	6	5	14	2	1	0	30
Missouri	5	0	2	5	6	3	2	0	1	24
Colorado	2	0	1	2	5	4	2	0	0	16
Dist. of Columbia	0	0	4	4	5	3	0	0	0	16
Minnesota	0	0	2	2	5	4	0	0	0	13
Massachusetts	2	0	2	1	0	8	0	0	0	13
Kentucky	1	0	2	1	4	1	3	0	0	12
Delaware	1	0	2	1	3	4	0	0	0	11
Michigan	3	0	1	2	1	4	0	0	0	11
Texas	0	0	0	2	1	6	2	0	0	11
Georgia	0	0	1	2	1	4	0	0	0	8
Indiana	2	0	0	0	3	2	0	0	0	7
Connecticut	1	0	1	0	2	2	1	0	0	7
Virginia	2	0	1	1	1	2	0	0	0	7
Alabama	2	0	3	0	0	1	0	0	0	6
Mississippi	0	0	1	0	4	0	1	0	0	6

	G.	E.E.	Sr.	Jr.	So.	Fr.	Q.	Sp.	Par.	Total
North Carolina	3	0	0	0	0	1	1	0	0	5
California	1	0	0	0	1	2	0	0	1	5
Arkansas	0	0	1	1	0	3	0	0	0	5
Tennessee	0	0	0	1	1	2	0	0	1	5
Oregon	0	0	0	0	3	2	0	0	0	5
New Hampshire	1	0	0	1	0	1	1	0	0	4
Florida	0	0	1	2	1	0	0	0	0	4
West Virginia	0	0	0	2	2	0	0	0	0	4
Louisiana	0	0	0	0	2	1	0	0	0	3
Maine	2	0	0	0	0	0	0	0	0	2
Iowa	1	0	0	0	1	0	0	0	0	2
South Carolina	1	0	0	0	0	1	0	0	0	2
Kansas	1	0	0	1	0	0	0	0	0	2
Wisconsin	0	0	0	2	0	0	0	0	0	2
Idaho	1	0	0	0	0	0	0	0	0	1
Nebraska	0	0	1	0	0	0	0	0	0	1
Rhode Island	0	0	0	1	0	0	0	0	0	1
Washington	0	0	0	0	1	0	0	0	0	1
Montana	0	0	0	0	1	0	0	0	0	1
North Dakota	0	0	0	0	1	0	0	0	0	1
South Dakota	0	0	0	0	0	1	0	0	0	1
Oklahoma	0	0	0	0	0	1	0	0	0	1
Utah	0	0	0	0	0	0	1	0	0	1
Canada	1	0	0	0	0	2	0	0	0	3
China	2	0	0	1	0	0	0	0	0	3
Japan	1	0	0	0	0	0	0	0	2	3
India	1	0	0	0	0	0	0	0	1	2
Cuba	1	0	0	0	0	0	0	0	0	1
England	0	0	0	0	1	0	0	0	0	1
Norway	0	0	0	0	0	1	0	0	0	1
Russia	1	0	0	0	0	0	0	0	0	1
	74	0	94	161	252	347	30	3	11	972

ABBREVIATIONS

A S, Alexander Hall, Seminary.
B, Blair Hall.
B S, Brown Hall, Seminary.
C, Campbell Hall.
C'y, Cuyler Hall.
E B, East Entry, David Brown Hall.
E M W, East Middle Entry, Witherspoon Hall.
E W, East Entry, Witherspoon Hall.
G C, Graduate College.
H, Holder Hall.
H'm, Hamilton Hall.
H S, Hodge Hall, Seminary.
L, Stafford Little Hall.
L P, Lower Pyne Building.
M D, Middle Entry, Albert B. Dod Hall.
N, Nassau Hall.
N D, North Entry, Albert B. Dod Hall.
N E, North Entry, Edwards Hall.
N M R, North Middle Entry, Reunion Hall.
N R, North Entry, Reunion Hall.
N W, North Entry, West College.
P, Patton Hall.
S D, South Entry, Albert B. Dod Hall.
S E B, South East Entry, David Brown Hall.
S E, South Entry, Edwards Hall.
S M R, South Middle Entry, Reunion Hall.
S R, South Entry, Reunion Hall.
S W, South Entry, West College.
S W B, South West Entry, David Brown Hall.
U P, Upper Pyne Building.
W B, West Entry, David Brown Hall.
W M W, West Middle Entry, Witherspoon Hall.
W W, West Entry, Witherspoon Hall.
'79 H, Seventy-nine Hall.

DIRECTORY

OF OFFICERS AND STUDENTS IN ALL DEPARTMENTS OF THE UNIVERSITY

The name of every officer is printed in SMALL CAPITALS. The number in parenthesis after the name indicates the page in the catalogue on which the name appears.

The names of students are followed by the designation of their several classes (*f*, Fellow; *g*, Graduate Student; *ee*, School of Electrical Engineering; *Sr.*, Senior; *Jr.*, Junior; *So.*, Sophomore; *Fr.*, Freshman; *q*, Student Qualifying for Regular Standing; *Par.*, Student Pursuing Partial Course; *Sp.*, Special Students; the name of each undergraduate is followed also by an abbreviation indicating the degree for which he is a candidate, viz., *a*, Bachelor of Arts; *l*, Bachelor of Letters; *s*, Bachelor of Science; *ce*, Civil Engineer.

The abbreviations of the residences of officers and students are found on page 512.

Aaron, M. L., *So. l* or *s* 6 E W
Abbett, S., *So. l* or *s* 65 C
ABBOTT, F. F., *Professor* (24) 62 Battle Rd.
ADAMS, E. P., *Professor* (24) Absent
ADRIANCE, W. M., *Ass't Professor* (29) Absent
Alexander, D. H., *Fr. a* 164 L
ALEXANDER, J. W., *Lecturer* (34) Absent
Alford, D. C., *So. l* or *s* 33 H
Alford, K. W., *Jr. l* 33 H
Allen, M. S., *f* 21 G C
Allison, J., *Fr. l* or *s* 14 S M R
Alyea, E. P. D., *Jr. s* 1 S D
Amen, J. H., *Jr. a* 2 B C
Anderson, A., Jr., *Jr. l* 91 H
Anderson, A. G., *g* 41 B S
ANDERSON, C. H., *Municipal Reference Librarian* (316) University Library
Anderson, D. C., *So l* or *s* 8 C H
Anderson, G. C. A., *Fr. l* or *s* 11 N D
Anspach, M. R., *Jr. l* 6 W M W
Aoyoshi, K., *Par.* 44 B S
ARMSTRONG, E. C., *Professor* (28) G C
Armstrong, J. N., Jr., *So. a* 10 E M W
Armstrong, S. W., *Sr. l* 10 E W
Arnold, D. R. J., *Sr. l* 51 B
Aronsohn, N. H., *Jr. l* 132 H
Arrowsmith, W. W. W., *Jr. a* 12 N W
Atkinson, C. U., *Fr. a* 12 S M R
Azoy, G. V., *So. l* or *s* 124 H

Babson, T. E., *Sr. l* 3 E M W
Bade, W. H., *Jr. l* 90 Nassau St.
Baer, H. M., *Jr. l* 75 H
Baird, C. H., *Fr. a* 13 A H
Baird, W. J., Jr., *So. l* or *s* 13 A H
Baker, H. D., *So. l* or *s* 304 H
Baker, W. B., *Fr. l* or *s* 113 H
Baker, W. R., Jr., *Jr. l* 44 B
Ball, F. St. C., *Sr. l* 15 B
Ball, R. C., *Fr. ce* 12 H
Barbee, E. L., *Fr. l* or *s* 311 H'm
Barclay, W. L., Jr., *Fr. a* 4 E M W
Barnes, B. S., *q* 298 Nassau St.

Barnett, R. F., *Jr. l* 90 Nassau St.
Barnhouse, D. G., *Par.* 35 A S
Barnum, P. T., *Sr. l* 23 L
Barrett, J. H., *Sr. a* 34 H
Barringer, B., *Fr. a* 32 C
Barringer, D. M., Jr., *Fr. l or s* 32 C
Barton, H. A., *Jr. s* 11 H'm
Bartow, T. M., *Fr. l or s* 4 W M W
Baskerville, A. P., *So. a* 15 Vandeventer Ave.
BASORE, J. W., *Ass't Professor* (28) 101 Library Pl.
Bassett, R., *So. l or s* 72 H
Bates, B. B., *So. l or s* 24 H'm
Batt, L. T., *Fr. l or s* 17 N E
Batten, J. M., *g* 72 B S
Battle, G. K., *Jr. l* 7 L P
BAUER, J., *Ass't Professor* (33) Absent
Bauernschmidt, G. W., *q* 6 E M W
Bauhan, G. L. T., *Jr. l* 8 N W
Beal, J. H., Jr., *So. l or s* 90 Nassau St.
Bechtel, J. G., *Sr. l or s* 8 B, H
Beckhart, B. H., *Jr. a* 5 W M W
BEGGS, G. E., *Ass't Professor* (32) 78 Jefferson Rd.
Belknap, M., *g* 124 G C
Bell, A. B., *Fr. ce* 2 W M W
Bell, W. W., Jr., *Jr. l* 42 '79 H
Beltman, H., *g* 205 H S
BENDER, H. H., *Ass't Professor* (31) 120 Fitz Randolph Rd.
Benedict, T. H., *Fr. ce* 37 N E
Benson, J. M., *Fr. l or s* 7 N E
Benua, W. E., *Fr. l or s* 33 L
Berry, G. P., *Fr. l or s* 16 B
Bickford, J. D., *g* 14 D G C
Biggs, J., Jr., *Sr. l* 42 C
Billings, C., *Fr. ce* 64 H
Bird, W. C., *Fr. l or s* 301 H'm
Bissell, P. T., *g* 154 G C
Bitten, R. M., *Jr. s* 2 N E
Black, E., *So. l or s* 83 B
Black, W., *Sr. a* 93 H
Blackwell, F. O., Jr., *Fr. ce* 309 H'm
Blakely, H. B., *g* 417 H S
BLAU, M. F., *Professor* (26) 42 Princeton Ave.
Blauvelt, H. B., *So. a* 25 C
Blossom, F. McC., *Jr. l* 21 '79 H
Blue, R. E., *So. l or s* 52 L
Blumberg, L., *Sr. l* 6 S W
Bluntschli, R. W., *Fr. l or s* 114 B
Boand, A. V., *g* 403 H S
Bolton, W., Jr., *Fr. l or s* 74 B
Bonbright, C. W., *Sr. l* 34 C
Boteler, E. S., Jr., *Fr. l or s* 15 University Place
Bauma, C., *g* 21 B S
BOUTROUX, P. E., *Professor* (27) Absent
BOWMAN, A. A., *Professor* (27) Absent
Bowman, F. B., *Fr. l or s* 15 S D
Bowman, H. N., *f* 128 G C
Bowman, J. A., *Sr. a* 164 Nassau St.
Bowman, J. W., *g* 15 A S
Bowman, W. McK., *Sr. l* 20 W W
Boyd, J. R., *Sr. l or s* 7 E M W
Bradley, L. C., Jr., *Sr. l* 34 H
Brandon, C. A., *Sr. l or s* 92 B
Brandt, R. L., *Fr. l or s* 28 S E
Brawner, A. H., Jr., *Fr. l or s* 16 H'm
Bray, A. R., *Jr s* 12 M D
Brewster, B. H., 3rd, *Fr. l or s* 81 H
BRIGHAM, C. C., *Instructor* (37) Absent
Brock, B. M., *So. l or s* 3 U P
Brooks, E. J., *So. l or s* 84 H
Brooks, W. H., Jr., *So. l or s* 112 L
Brotemarkle, R. A., *g* 12 A S
Brown, B. N., *Fr. l or s* 122 L
Brown, E. L., *Fr. ce* 171 L
Brown, H. L., *Fr. l or s* 18 N W
Brown, L. A., *g* 15 D G C
BROWN, P. M., *Professor* (27) 9 Nassau Hall
Brown, R. E., *So. l or s* 52 L
Bruns, F. W., Jr., *So. l or s* 111 B
Brush, J. M., *Fr. l or s* 91 B
Bryan, F. T., IV, *Sr. l* 22 '79 H
Bryan, G. P., *Fr. a* 21 M D
Bryan, J. H., *Fr. l or s* 65 B
Bryan, W. B., Jr., *So. l or s* 25 C
Buchanan, J. C., *Sr. a* 12 C

Bucknall, B. C., *Fr. l* or *s* 90 Nassau St.
Buechner, C. F., Jr., *So. l* or *s* 6 N D
Buermeyer, L. L., *f* 144 G C
BUFFUM, D. L., *Professor* (26) 60 Hodge Rd.
Burch, H. J., *Sr. l* 54 C
Burke, J. L., *So. l* or *s* 26 C
BURNHAM, C. E., *Choirmaster* (363) 31 Univ. Pl.
Burns, L. S., Jr., *Fr. l* or *s* 91 B
BURNS, R. M., *Assistant* (37) 2 A G C
Buschman, L. V., *g* 20 A S
Bushnell, A. S., *Fr. l* or *s* 64 H
Butcher, A. S., *Fr. l* or *s* 25 N E
Buterbaugh, D. R., *Fr. l* or *s* 82 B
Butler, C. M., *So. l* or *s* 44 H
Butler, F. D., *Sr. l* 134 L
BUTLER, H. C., *Professor* (23) Pyne Tower, G C
Butler, H. R., Jr., *So. l* or *s* 107 Library Pl.
Butt, S. McC., *f* 114 G C
Butts, L. McC., *Sr. l* 11 H

Caldwell, D. T., *g* 206 H S
CALDWELL, W. T., *Assistant* (37) 27 Vandeventer Ave.
Callahan, H. A., *Fr. l* or *s* 48 B S
Callery, F. A., *So. l* or *s* 32 H
Callisen, S. A., *So. l* or *s* 19 S M R
Cameron, C. E., *So. l* or *s* 6 M D
Campbell, H. S., *Fr. l* or *s* 12 N M R
Campbell, J. G., *Jr. a* 31 '79 H
Campbell, J. G., *So. l* or *s* 6 S D
Campbell, J. M., *g* 23 G C
Campbell, J. R., Jr., *Fr. l* or *s* 16 S E
Cannon, R. A., *So. a* 4 N M R
CAPPS, E., *Professor* (24) 150 Fitz Randolph Rd.
Carey, A. G., *Fr. l* or *s* 81 H
Carey, T. D., *g* 215 H S
CARNOCHAN, J. McD., *University Physician* (38) The Infirmary
CAROTHERS, N., *Ass't Professor* (33) 35 Park Pl.
Carmichael, F. L., *f* 14 A S
Carpenter, C. C. J., *Fr. a* 24 Dickinson St.
Carrick, C. L., Jr., *So. a* 11 M D
Carson, J., Jr., *Fr. a* 12 W W
Carter, F. B., *Jr. l* 9 S D
Carter, W. S., *Fr. a* 42 S E
Carver, A. B., *Sr. l* 34 C
CARY, L. R., *Ass't Professor* (33) 36 Wiggins St.
Casey, C. M., *Jr. l* 3 A C
CAWLEY, R. S., *Dept. Librarian* (316) Guyot Hall
Chamberlin, P. M., *So. l* or *s* 51 L
Chandler, H. E., *Par* 51 Aiken Ave.
Chapin, C. M., Jr., *Fr. a* 33 C
Chapman, F. M., Jr., *Fr. l* or *s* 14 N D
CHAPMAN, P. A., *Instructor* (35) Absent
Chappell, W. F., Jr., *So. a* 102 H
Chase, G. H., III, *So. a* 131 H
Cherry, G. D., *Sr. l* 44 '79 H
Chisholm, H. L., *Fr. a* 24 L
Christie, A. E., *Sr. a* 8 S R
Churchill, G. K., *Fr. l* or *s* 151 L
Cisco-Smith, G., *Fr. l* or *s* 15 S D
Clark, M. E., *So. l* or *s* 15 N E
Clark, W. L., *Jr. l* 9 A, H
Clarke, A. H., *Fr. ce* 9 E W
Clarke, R., *g* 230 Nassau St.
Cleveland, R. F., *Jr. a* 2 B, C
Closson, J. H., *Par.* 13 B
COAN, W. J., *Proctor* (39) 2 N M R
Cochran, J. L., Jr., *Fr. l* or *s* 7 N D
Cockfield, W. E., *f* 1 B, G C
Coffey, E. H., Jr., *So. l* or *s* 13 N E
Cohen, R. S., *Jr. l* 41 C
Cohn, B. W., *So. l* or *s* 14 A H
Collins, S. B., *Fr. a* 16 B
COLLINS, V. L., *Professor* (26) 214 The Western Way
Colwell, E. T., *Fr. l* or *s* 13 N E
Comly, S. N., *Jr. l* 31 C
COMPTON, K. T., *Ass't Professor* (32) 58 Murray Pl.
Compton, W. R., Jr., *So. l* or *s* 27 C

Comstock, F. A., *Jr. l* 90 Nassau St.
Comstock, G. C., Jr., *Fr. a* 115 B
Conant, S. D., *Jr. a* 90 Nassau St.
CONDIT, K. H., *Instructor* (35) Absent
CONKLIN, E. G., *Professor* (24) 139 Broadmead
Connelly, H. P., *So. l* or *s* 8 A H
Conner, J., *Fr. l* or *s* 11 N D
Conover, A. E., Jr., *Fr. ce* 35 S E
CONSTANT, F. H., *Professor* (27) 57 Battle Rd.
Cook, E. E., *Fr. ce* 121 L
Cooke, G. C., *So. l* or *s* 33 B
COOKE, H. L., *Ass't Professor* (30) Absent
Cooper, E. N., Jr., *Jr. s* 15 M D
Cooper, F. S., *Jr. a* 24 '79 H
Cooper, J. W., Jr., *Fr. l* or *s* 24 Dickinson St.
Cooper, N. H., *Sr. l* 4 N R
Cooper, W. P., Jr., *Par.* 142 G C
Corbett, F. T., *Fr. l* or *s* 16 H'm
CORWIN, E. S., *Professor* (25) 115 Prospect Ave.
COSGRAVE, J. S., *Assistant to the Treasurer* (39) Stanhope Hall
Cossum, R. W., *Fr. l* or *s* 14 N M R
Cost, H. F., *g* 200 H S
COTTON, H. A., *Lecturer* (34) Trenton, N. J.
Cotton, J. P., *So. ce* 53 B
COTTRELL, W. R., *Sup't of Circulation* (316) University Library
Cover, L. A., Jr., *Fr. l* or *s* 8 W M W
COVINGTON, H. F., *Professor* (25) 34 Edgehill St.
Cowan, J. B., Jr., *So. l* or *s* 10 A H
Cowan, P. B., *Fr. l* or *s* 16 N W
Cox, I. J., *Jr. l* 6 W M W
Coxe, H. C., *So. a* 62 '79 H
Crabtree, E. M., *Fr. l* or *s* 42 L
Craig, G. L., Jr., *Fr. l* or *s* 154 L
CRAM, R. A., *Supervising Architect* (18) Boston, Mass.
Crane, B. F., *So. a* 5 A H
Crane, F. R., *Sr. l* 3 A, H
Creasey, S. B., *Fr. a* 24 Dickinson St.
Creese, J., *Sr., l* 9 N R
CRITCHLOW, F. L., *Ass't Professor* (29) 6 Mercer St.
Crocker, F. S., *So. a* 102 H
Croll, J. D., *Fr. l* or *s* 134 H
CROLL, M. W., *Ass't Professor* (29) 6 N R
Crossley, A. M., *Sr. a* 5 N R
Crouse, C. I., *Fr. a* 10 N M R
CUDE, E. C., *Assistant* (37) 54 Murray Pl.
Cudlipp, C., *Jr. l* 106 P
Cumings, W. B., *Fr. l* or *s* 103 H
Currie, E. W., *Sr. l* 9 S E
Curtis, G. H., *Fr. ce* 64 C
Curtiss, J. S., *Fr. l* or *s* 8 M D

Dabney, L. M. Jr., *Fr. a* 9 N W
DAHLGREN, U., *Professor* (25) 7 Evelyn Pl.
Dall, C. B., *So. l* or *s* 6 E M W
Dane, N. B., *So. l* or *s* 72 B
Danforth, D., *So. l* or *s* 185 L
Daniell, J. R., *So. l* or *s* 121 H
Dater, J. Y., Jr., *Fr. a* 2 A C
Davidson, D. B., *g* 2 A S
Davies, J. A. V., *q* 39 N E
Davis, A. P., *Fr. l* or *s* 74 B
Davis, J. E., *Fr. l* or *s* 5 M D
Davis, P. H., *Fr. a* 58 Mercer St.
DAVIS, R., *Sup't of Grounds and Buildings* (39) Stanhope Hall
Dean, J. S., *Fr. l* or *s* 2 W M W
Dean, P. N., *So. l* or *s* 7 N M R
Dear, J. A., Jr., *So. l* or *s* 11 W W
Decker, C. S., *q* 11 H'm
DEFERRARI, R. J., *f* 152 G C
DeGroot, W., *g* 23 Bank St.
Dell, G. W., *So. l* or *s* 1 E H'm
DeLong, C. F., *Jr. a* 12 U P
Demarest, K. E., *So. l* or *s* 2 C H
DeMaris, F. A., Jr., *So. l* or *s* 3 W M W
Dennis, H. V., III, *Sr. a* 144 L
Dennis, J. P., *So. l* or *s* 63 B
Denny, C., Jr., *Fr. a* 5 A C
Denniston, R., Jr., *Fr. l* or *s* 15 N W
Depue, S., *Fr. l* or *s* 2 A H'm

Deuel, F. S., *So. l* or *s* 63 H
Dew, W. A., *Fr. l* or *s* 8 N E
DEWING, H. B., *Ass't Professor* (33) 12 Edgehill St.
DEWITT, J., *Trustee* (17) 31 Library Pl.
Deyo, H. N., *So. l* or *s* 14 '79 H
Dibrell, E. R., *Jr. l* 61 L
Dickson, S. S., *g* 14 C G C
DIRKS, H. B., *Ass't Professor* (33) 80 Jefferson Rd.
Dixon, J. P., *Fr. a* 6 S M R
DIXON, J., *Trustee* (17) Trenton, N. J.
Dodd, S. T., Jr., *So. ce* 20 S E
Donnelly, L., *Jr. l* 7 W W
Donner, C. H., *So. ce* 24 B
Donohue, F. M., Jr., *Fr. l* or *s* 143 L
Douglas, E. O., *Jr. a* 13 '79 H
Douglas, J. H., Jr., *So. l* or *s* 186 L
Downs, W. H., *So. l* or *s* 162 L
Dreyfuss, S. W., *Jr. l* 62 H
Driscoll, H. McP., *Fr. l* or *s* 41 N E
Drohan, J. H., *Sr. a* 5 E M W
Drowne, H. R., Jr., *So. a* 131 H
Dubbs, H. M., *Sr. a* 6 S R
DUFFIELD, H. G., *Treasurer* (38) Stanhope Hall
DUGAN, R. S., *Ass't Professor* (30) 40 Patton Ave.
Dulles, F. R., *Fr. l* or *s* 28 C
Duncan, W. G., *Sr. a* 43 '79 H
Dunn, A., Jr., *Fr. l* or *s* 19 Bank St.
Dunn, R. H., *Jr. l* 20 N W
Dunn, R. P., *Jr., l* 21 '79 H
Dunn, W. C., *Jr. l* 41 '79 H
DURHAM, D. B., *Ass't Professor* (32) 72 Univ. Pl.

Eaby, C. R., *Sr. l* 31 B
Eagle, J. P., *Fr. l* or *s* 66 L
Edmunds, H. S., *g* 208 H S
Eells, H., *g* 203 H S
Egner, H. F., *So. l* or *s* 33 B
Egner, J. E., *Jr. l* 22 B
Ehret, R. M., *Fr. a* 52 H
EISENHART, L. P., *Professor* (24) 22 Alexander St.
ELDERKIN, G. W., *Ass't Professor* (30) Absent
Elgin, C. P., *So. ce* 5 N W
Elwood, S. W., *So. l* or *s* 54 '79 H
English, G. M., *So. l* or *s* 2 N D
English, T. H., *Sr. l* 24 N E
English, W. H., Jr., *Fr. l* or *s* 153 L
ENO, H. L., *Research Associate* (34) 78 Stockton St.
Enos, E. M., *So. l* or *s* 12 B
EPPLEY, M., *Lecturer* (34) Absent
Erdman, C. R., Jr., *Jr. a* 20 Library Pl.
Etheridge, H. A., Jr., *Jr. s* 43 B
Evans, J. P., *Fr. l* or *s* 34 S E
EVANS, T. S., *Secretary, Philadelphian Society* (354) Dodge Hall
Ewing, T. D., *Fr. a* 21 S E
Eynon, G. L., *So. a* 83 B

Fagan, A. L., *Fr. l* or *s* 142 L
Farr, H. A., *Fr. ce* 42 Wiggins St.
Farr, J. McC., III, *So. l* or *s* 3 E W
FARR, M. S., *Ass't Professor* (29) Absent
Farr, W. R., *Fr. l* or *s* 13 S W
FARRAND, B., *Consulting Landscape Gardener* (18) New Haven, Conn.
FARRAND, W., *Trustee* (18) Newark, N. J.
Fawcett, A. H., *So. l* or *s* 17 S W
Fawcett, J. H., *Fr. a* 32 S E
Fennelly, J. F., Jr., *So. l* or *s* 22 L
FETTER, F. A., *Professor* (25) 121 Broadmead
Field, J. B., *So. l* or *s* 64 B
FINE, H. B., *Dean of the Departments of Science* (21) 73 Library Pl.
Fine, H. B., *So. l* or *s* 2 E W
Fink, H., *Fr. l* or *s* 141 H
Finney, G. G., *Fr. l* or *s* 54 H
FINNEY, J. M. T., *Trustee* (17) Baltimore, Md.
Firestone, H. S., Jr., *So. l* or *s* A B
Fisher, E. T., *So. ce* 172 L
Fisher, H. R., *Fr. l* or *s* 24 S E

FITE, W., *Professor* (28)
138 Fitz Randolph Rd.
Fitzgerald, F. S., *Sr. l* 24 C
Flaig, J. V., *So. l* or *s* 1 N D
FLEECE, C. L., *Instructor* (35)
54 Murray Pl.
Fleming, H. R., *Fr. ce* 27 S E
FLEMING, M. C., *Trustee* (18)
New York, N. Y.
Fleming, M. C., Jr., *Fr. a* 76 H
Fletcher, M., *Jr. l* 73 B
Flinn, I. M., Jr., *Fr. a* 133 L
Flinn, L. B., *Sr. a* 133 L
Folmer, W. F., *Fr. l* or *s* 102 B
Forbes, R. L., *Fr. l* or *s*
24 Dickinson St.
FORD, H. J., *Professor* (24)
42 Cleveland Lane
Foresman, D. B., *Fr. l* or *s* 21 N E
Foster, C. A., *Fr. a* 29 S E
Foster, R. H., *Fr. a* 9 B
Foster, J. A., Jr., *Sr. ce* 105 H
FOSTER, W., *Professor* (24)
41 Battle Rd.
Fox, G. G., *So. a* 14 B
Fox, L. P., *Instructor* (36)
12½ Vandeventer Ave.
Frankel, G. A., *Jr. l* 75 H
Frantz, S. G., *Sr. ce* 9 N R
Franz, J. N., *So. l* or *s* 12 H'm
Freer, W. B., *Fr. l* or *s*
90 Nassau St.
FRENCH, N. R., *Instructor* (36)
Absent
Frey, H. E., *So. l* or *s* 29 N E
FRICK, H. C., *Trustee* (17)
Pittsburgh, Pa.
Friend, A. M., Jr. *f* 15 A G C
Fringer, D. L. B., *So. ce* 8 S M R
FRITTS, F., *Ass't Professor* (33)
Pyne Tower, G C
Furness, G. W., *Fr. l* or *s* 25 M D
Fyffe, W. B., *So. l* or *s* 121 H

Gaffney, H. B., *Fr. l* or *s* 14 W W
GALT, G. McF., *Secretary of the Bureau of Student Self-Help* (39) 32 Mercer St.
Gardner, E. R., *Jr. l* 61 C
GARDNER, O. F., *Presbyterian Representative, Philadelphian Society* (354) Absent
Garnaus, C. E., *So. l* or *s* 20 M D
Garrett, J. H., *Fr. l* or *s* 14 S D
GARRETT, R., *Trustee* (17)
Baltimore, Md.
Garrigues, C. B. M., *So. l* or *s*
52 C
Garrigues, W. A., Jr., *Jr. l*
104 H
Garvey, C. P., Jr., *Fr. l* or *s* 7 B H
GAUSS, C., *Professor* (24)
106 Fitz Randolph Rd.
Gaver, W. U., *Sp.* 2 B
Gehman, J. L., *g* 201 H S
Geissinger, M. N., *q* 4 N R
George, W. C., *f* 2 A G C
Georgi, C. H., *So. ce* 72 B
GEROULD, G. H., *Professor* (28)
341 Nassau St.
Gerstley, H. E., *So. l* or *s* 63 L
Gibboney, D. C., Jr., *Jr. l* 23 B
Giessing, C. P., *f* 24 G C
Gilbert, C., Jr., *Fr. l* or *s* 134 H
Gilfillan, J., *Fr. a* 82 B
Gillespie, J. P., *So. a* 10 L P
GILLESPIE, W., *Professor* (25)
Absent
Gillette, A. A., *Sr. a* 2 A, H
Giraud, A. P., *f* 148 G C
Godfrey, S., *Sr. l* 31 B
Goldman, R. S. W., *Jr. l* 132 H
Goldsmith, R., *Jr. a* 22 L
Goldstein, I., *Sr. a* 9 S W
Goodchild, D., *Sr. a* 27 M D
Gotshalk, W. C., III, *Fr. a*
40 N E
Gould, A. B., *Par.* 33 B S
Govin, R. R., Jr., *Fr. a* 76 H
Gowing, E. P., *Sr. ce* 3 S D
Grandin, F. S., *Fr. ce* 10 M D
Grant, C. H., *Sr. ce* 13 N D
Gray, D. S., *Fr. l* or *s* 111 L
Gray, G. B., Jr., *So. l* or *s* 10 A H
Gray, J. H., *So. l* or *s* 112 B
Gray, W. S., Jr., *Jr. a*
90 Nassau St.
GREEN, H. W., *Trustee* (17)
Trenton, N. J.
Greenleaf, G. E., *So. l* or *s*
10 M D
Greenleaf, W. J., *g* 23 G C
Greenlee, W. W., *Fr. a* 17 S M R

Greey, E. B., *Fr. ce* R. F. D. 3
Gregor, C. R., *So. a* 61 B
Gregory, T. W., Jr., *Jr. l* 34 '79 H
Grier, J. L., *g* 317 H S
GRIFFIN, N. E., *Ass't Professor* (29) 132 Mercer St.
Griffiths, W. D., *Jr. a* 19 S W
Griggs, E. L., *q* 19 S W
Groel, F. H., *Fr. l* or *s* 35 William St.
GROSS, H., *Infirmarian* (39) McCosh Infirmary
Guerin, S. V., *Jr. s* 5 S R
Guilbert, F. W., *Jr. l* 23 '79 H

Hackney, G. E., *So. l* or *s* 74 H
Haffner, W. B., *Jr. l* 23 B
Hagemeyer, J. G., *So. a* 9 W W
Haigh, T. D., *So. a* 32 L
Haight, R. A., *Fr. l* or *s* 16 M D
Haines, C. H., *Fr. l* or *s* 10 S D
Hale, C., Jr., *Fr. a* 12 S E
HALL, C. R., *Ass't Professor* (32) 94 Bayard Lane
Hall, R. H., *q* 312 H'm
Hall, S. E., *Fr. l* or *s* 3 W W
HALL, W. P., *Ass't Professor* (32), Absent
Halliburton, R., *Fr. l* or *s* 32 B
Halsey, C. D., Jr., *Fr. l* or *s* 65 H
Halsted, D. M., *So. l* or *s* 42 B
Hamilton, R. L., *So. l* or *s* 8 C H
Hamilton, W. H., Jr., *Fr. a* 151 L
Hammer, W. T., *Sr. l* 4 S M R
Hammond, E. S., *g* 31 Williams St.
HANDY, P. D., *Trustee* (17) New York, N. Y.
Hansel, E., *g* 15 B S
Hansen, E. L., *Fr. ce* 106 Nassau St.
Happer, A. P., III, *So. l* or *s* 12 A H
HARDING, E. A., *f* 52 Jefferson Rd.
Hargest, T. S., II, *Jr. a* 17 B
Haring, N. W., *Jr. a* 93 B
Harlan, J. M., *So. a* 308 H'm
HARPER, G. McL., *Professor* (21) 36 Mercer St.
Harper, G. McL., Jr., *So. a* 14 S W
Harris, A. K., *Jr. l* 66 H
Harris, E., *So. l* or *s* 131 L
HARRIS, W. B., *Professor* (22) Greenholm
Harris, W. I., *So. a* 74 H
Harth, H. C. P., *Fr. l* or *s* 2 W W
Hartshorne, R., *So. l* or *s* 1 W M W
Harvey, H. A., *Fr. ce* 56 B S
HARVEY, E. N., *Ass't Professor* (33) Absent
Haupt, D. D. M., *Jr. l* 16 S M R
Haviland, S. T., *So. l* or *s* 51 H
Hawke, W. B., *Fr. l* or *s* 2 E M W
Hax, W. B. F., *Jr. l* 5 S D
Hazard, E., *Sr. a* 18 S W
Heath, T., *So. l* or *s* 122 H
HEERMANCE, R., *Ass't Professor* (31) Absent
Heimerdinger, H. L., *Sr. l* 103 B
Heiserman, R. B., *So. l* or *s* 131 L
Helliwell, C. H., *Fr. a* 40 S E
Helm, H., Jr., *Fr. a* 97 B
HELMICK, B. C., *Assistant* (37) 238 Nassau St.
Henderson, B. H., *Fr. l* or *s* 6 B
Henderson, R. H., *q* 6 W W
HENRY, B., *Trustee* (17) Philadelphia, Pa.
Herndon, E. T., *Fr. l* or *s* 38 L
Herron, P. J., *Sr. a* 61 '79 H
Herron, S. D., *Sr. a* 61 '79 H
Herzog, E. H., *Fr. l* or *s* 18 L
Hewitt, H. H., Jr., *Sr. l* or *s* 18 S M R
HIBBEN, J. G., *President* (20) Prospect
Hicks, W. A., *Jr. l* 15 C
Hill, J. P., *Jr. l* 90 Nassau St.
Hillegass, C. E., Jr., *Jr. a* 5 N R
Hitzrot, L. H., *So. a* 6 S D
Ho, M., *g* 11 C, G C
Hockaday, I. O., III, *Fr. l* or *s* 13 E W
Hoge, F. E., *Fr. l* or *s* 15 N W
Hopkins, D. L., *Fr. l* or *s* 62 B
Hopkins, J. L., *Fr. l* or *s* 4 W M W
Hopkinson, R., *Fr. l* or *s* 3 W W
Horne, R. J., *So. l* or *s* 10 N R

Hornsey, J. W., Jr., *Fr. ce* 10 W W
Horton, A. W., Jr., *So. a* 3 N E
HOSKINS, J. P., *Professor* (26) 22 Bank St.
Houck, L. D., *So. l* or *s* 44 H
HOWELL, B. F., *Instructor* (36) Absent
Howley, J. G., *Jr. a* 13 B
Hubbell, E. S., *So. ce* 3 S M R
Hughes, W., *Fr. l* or *s* 8 S E
HULETT, G. A., *Professor* (24) 44 Washington Rd.
Hungerford, C., *Fr. ce* 5 B
Hunt, T. B., *f* 101 G C
HUNT, T. W., *Professor* (20) 72 Library Pl.
Hunter, G. R., *Fr. a* 22 H'm
Hunter, W. C., *g* 156 G C
HURD, F. L., *Dept. Librarian, Economics* (316) University Library
HUSS, H. C. O., *Professor* (21) 6 Mercer St.
Hutchins, J. M., *So. l* or *s* 24 H'm
Hutchinson, W. C., *So. l* or *s* 2 C H
HUTSON, F. L., *Ass't Professor* (28) The Bachelors
Hynson, J. N., *q* 2 D H

Illingworth, R. W., *Fr. a* 20 N E
Ireland, T. S., *Sr. a* 13 U P
Irons, H. C., Jr., *Fr. l* or *s* 54 L
Irwin, S. B., *Fr. a* 8 E W
Iwasaki, S., *Par.* 3 B S

Jackson, S. A., *So. a* 9 S M R
Jacobs, A. B., *Fr. ce* 33 S E
Jacobs, E. A. S., *Jr. l* 41 C
Jacobs, J. S., Jr., *So. l* or *s* 15 N M R
Jacobs, W. S., Jr., *q* 8 N R
JACOBUS, M. W., *Trustee* (17) Hartford, Conn.
Jamison, J. M., Jr., *So. a* 162 L
Jamison, L. F., *Jr. a* 13 N M R
Jeffers, G. S., *Fr.* 72 L
Jelliffe, S. E., Jr., *So. l* or *s* 5 A H
Jenkins, A. E., *Jr. l* 104 B
Jennings, P., *Fr. l* or *s* 97 B
JOHNSON, A. C., *Ass't Professor* (31) 34 Bank St.
Johnson, A. DeB., *Jr. a* 23 S E
Johnson, H. D., *So. l* or *s* 21 C
JOHNSON, H. S., *Trustee* (18) Cleveland, O.
JOHNSON, R. B. C., *Professor* (25) 129 Broadmead
Johnson, W. F., *So. ce* 10 S R
Johnson, W. V., *Fr. l* or *s* 84 B
JONES, C. H., *Registrar* (38) 212 Nassau Hall
Jones, J. McL., *Sr. l* 2 A, H

Kalt, H. L., *q* 33 '79 H
Kassler, C. M., Jr., *Fr. l* or *s* 9 B
Kauffman, J. E., *g* 45 B S
Kauffmann, S. H., *So. l* or *s* 6 N D
Kawakatsu, K., *g* 76 B S
Kaye, L. G., *So. l* or *s* 44 C
Kazanjian, A., *Fr. l* or *s* 24 Dickinston St.
Kazanjian, B., Jr., *Sr. l* 64 '79 H
Keach, W., *Jr. l* 81 B
Keck, J. S., *Fr. ce* 7 N E
Keller, H. P., *Jr. l* 13 N D
Kelley, D. W., *Jr. l* 9 A H
Kelley, McC., *Fr. l* or *s* 14 N E
Kelly, E. B., *Jr. l* or *s* 68 L
Kelsey, A. F., *Fr. l* or *s* 98 B
Kelsey, C. T., *So. l* or *s* 11 S D
KEMMERER, E. W., *Professor* (26) 128 Fitz Randolph Rd.
KENNEDY, C. W., *Ass't Professor* (30) Absent
Kennedy, E. S., *Jr. a* 22 M D
Kennedy, P. E., *Fr. l* or *s* 10 S D
Kent, R. E., *Fr. l* or *s* 7 S E
Kerper, E. H., *Sr. s* 5 S W
Kerr, C. M., Jr., *Fr. l* or *s* 26 S E
Kessinger, F. E., *Fr. a* 63 H
Ketchum, F. S., *So. l* or *s* 34 B
Keyes, E. W., III, *Fr. l* or *s* 2 S D
Kiehl, M. B., *Sr. l* 43 L
Kilby, T. E., Jr., *Fr. a* 7 B H
King, D. M., *Jr. a* 43 B
King, R. B., *Fr. l* or *s* 11 E W
Kinnard, L. R., *Jr. a* 14 N W
Kirbach, W. C., *Jr. a* 17 B
Kirkland, W. A., *Jr. a* 90 Nassau St.
Kleffman, A. H., *g* 213 H S

Klipstein, K. H., *Fr. a* 19 M D
Kloppenburg, W. B., *Jr. l* 10 S W
KNAUTH, O. W., *Ass't Professor* (32) Absent
Knowles, N., Jr., *Fr. ce* 4 E M W
Knowlson, E. T., *Jr. l* 104 B
Knox, A. G., *Fr. l* or *s* 4 L P
Koblegard, H. H., *So. l* or *s* 51 L
Kopp, E. C., Jr., *Fr. ce* 35 Park Pl.
KOREN, W., *Ass't Professor* (29) 105 Fitz Randolph Rd.
Kretschmann, P. M., *Jr. a* 13 S M R
Kurth, E. H., *q* 19 S E
Kuser, J. D., *Jr. l* 14 C
Kuser, J. L., Jr., *So. l* or *s* 32 H

Labouisse, J. W., *Fr. l* or *s* 13 N W
LaForce, W. B., *So. l* or *s* 22 L
LaForce, W. W., *Jr. l* 1 W M W
Laird, C. W., *So. l* or *s* 34 B
Lamarche, R. F., *Jr. a* 9 M D
Lamont, R. S., *So. l* or *s* 38 S E
Lampley, I. T., *Sr. l* 15 B
Lane, M. H., *Sr. s* 4 S R
Larkin, G. B., *Jr. a* 12 '79 H
Latrobe, G., Jr., *So. l* or *s* 84 H
Lawrence, G. A., *So. ce* 3 B H
Lawrence, R. N., *Fr. l* or *s* 5 S E
LEACH, H. S., *Reference Librarian* (35) Pyne Tower, G C
Leavitt, R. McD., *Fr. l* or *s* 15 W W
Lee, R. W., *So. a* 1 W M W
Leggett, H. A., *Fr. a* 32 Mercer St.
Leh, J. H., *Fr. l* or *s* 66 L
Leinbach, L. R., *Jr. s* 5 N D
Leslie, A. C., *Jr. a* 34 '79 H
Lewis, E. P. C., *Fr. a* 114 H
Lewis, J. F., Jr., *Fr. a* 111 L
LIBBEY, W., *Professor* (20) Thanet Lodge
Lincoln, F. W., Jr., *Fr. l* or *s* 24 L
Lindabury, R. V., Jr., *Fr. a* 24 C
Lineaweaver, T. H., *q* 64 '79 H
Linthicum, A. W., *So. ce* 23 C
Litch, R. B., *Fr. l* or *s* 8 N M R
Littleton, D. M., *Fr. l* or *s* 182 L
Littleton, M. W., *Fr. l* or *s* 182 L
Logan, R. L., *g* 33 A S
Long, W. W., *g* 25 A S
LONGWELL, H. C., *Ass't Professor* (33) 91 Mercer St.
LOOMIS, E. H., *Professor* (22) 302 Nassau St.
Loose, A. S., *Fr. a* 26 N D
Louchheim, W. C., Jr., *So. l* or *s* 54 B
LUEHRING, F. W., *Ass't Professor* (31) 110 New Moore St.
Luft, C. A., *Fr. l* or *s* 17 W W
Luke, D. K., *Jr. l* 62 B
Lyman, W. C., *Jr. s* 23 L
Lynch, J. G., *Fr. ce* 7 N E
Lynch, J. H., Jr., *Fr. a* 17 S E

McAlpin, B. B., Jr., *Fr. l* or *s* 65 H
McAlpin, D. H., III, *So. a* 2 B, H'm
McCABE, D. A., *Ass't Professor* (30) Absent
McCallum, J. D., *f* 2 B, G C
McCarter, T. N., Jr., *Fr. a* 11 C
McCauley, E. D., *Sr. l* Campus Club
McCaull, J. D., *Fr. l* or *s* 2 E M W
McCAY, L. W., *Professor* (21) 2 Morven St.
McCLELLAN, G. B., *Professor* (27) Absent
McCLENAHAN, H., *Dean of the College* (23) Joseph Henry House, College Pl.
McCLURE, C. F. W., *Professor* (22) 2 Morven St.
MacColl, A. M., *Fr. a* 61 C
McCOMAS, H. C., JR., *Ass't Professor* (32) 109 Broadmead
McCONNELL, W. O., *Instructor* (35) Absent
McCormick, A., *Fr. l* or *s* 7 S M R
McCORMICK, C. H., *Trustee* (17) Chicago, Ill.
McCormick, H. F., *Fr. a* 24 Dickinson St.
McCulloch, D., Jr., *Jr. a* 31 C
McCulloch, R. M., *Fr. l* or *s* 1 S E
McCulloh, G., *Fr. l* or *s* 5 M D
McCune, G., *q* 312 H'm

MacDonald, F. C., *Ass't Professor* (29) Absent
McDonnell, J. S., Jr., *Fr. l* or *s* 311 H'm
McElroy, R. McN., *Professor* (25) Absent
Macfarlane, J. F., *Fr. l* or *s* 35 L
McGean, R. L., *Jr. s* 11 '79 H
McGraw, D., *Fr. ce* 51 B
McIlvain, S. L., *So. l* or *s* 54 L
McIlwain, G. K., *Sr. s* 73 B
MacInnes, C. R., *Ass't Professor* (30) 12 Vandeventer Ave.
McKee, R. D., *Jr. l* 51 '79 H
Mackey, E., *So. a* 106 H
McKinnon, H. D., *Fr. a* 17 M D
MacLaren, M., *Professor* (24) 16 Prosect Ave.
McLaughlin, R. W. Jr., *Fr. a* 13 S E
MacLeod, H. B., *Fr. a* 18 E W
Macloskie, G., *Professor* (20) 239 Nassau St.
McMillan, C., *Professor* (20) 40 Bayard Lane
MacMillan, E. A., *Instructor* (36) Absent
McNulty, J. O., *Sr. a* 7 Park Pl.
McPherson, S. J., *Trustee* (17) Lawrenceville, N. J.
McWilliams, D. E., *Fr. a* 142 L
Macy, C. L., *Assistant* (37)
Madden, J. M., *So. l* or *s* 82 H
Madden, W. McK., *Sr. ce* Princeton Preparatory School
Magie, D., *Professor* (25) 101 Library Pl.
Magie, W. F., *Dean of the Faculty* (21) The Dean's House
Magonigle, G. B., *Fr. a* 53 L
Mahaffy, R. S., *Fr. l* or *s* 53 L
Makepeace, R. F., *Jr. l* 13 '79 H
Mandel, D., *Jr. l* 95 B
Manee, W. B., *Sr. l* 5 W W
Manny, E. S., *Jr. l* 34 L
Mapes, J. A., II, *So. a* 1 S M R
Marden, C. C., *Professor* (28) C G
Margetts, H. S., *Fr. l* or *s* 1 A H
Marks, A. W., *Jr. a* 2 S M R
Marks, J., *So. ce* 10 S R
Marquand, A., *Professor* (20) Guernsey Hall
Martin, E. H., *Fr. ce* 42 L
Martin, F. E. *q* 7 S D
Martin, H. K., *Jr. a* 31 N E
Martins, C., *Sup't of Purchase* (316) University Library
Marvin, W. B., *Sr. l* 1 N M R
Mather, F. J., Jr., *Professor* (25) Absent
Mather, W. M., *So. ce* 4 A C
Matlock, W. A., *q* 64 B
Matthews, H. F., *Fr. a* 7 W M W
Matthews, T. C., *Sr. ce* 8 S R
Matthews, W. R., *Fr. ce* 15 N D
Maxwell, J. C., *Jr. l* 51 '79 H
Mayer, A. G., *Lecturer* (34) 276 Nassau St.
Mayer, C. O., Jr., *Jr. a* 62 H
Mayer, W. S., *Sr. l* 62 L
Mayo, C. W., *Fr. a* 6 A H
Mead, A. F., *q* 14 S D
Mead, V. C., *Fr. l* or *s* 16 C
Meirs, W. W., *Sr. ce* 63 C
Menzies, A. W. C., *Professor* (27) 187 Prosect Ave.
Mercer, R. B., *So. l* or *s* 18 W W
Merrifield, R. E., *Fr. a* 16 E W
Metzger, R. S., *Fr. a* 26 M D
Meyer, E. B., *Fr. a* 12 H
Meyer, M. M., *Fr. l* or *s* 12 S D
Middleditch, F. A., *Sr. a* 5 S W
Miles, L. W., *Ass't Professor* (29) Absent
Millard, A. J., *So. l* or *s* 32 '79 H
Miller, A. K., *So. l* or *s* 51 C
Miller, C., *Sr. a* 26 C
Miller, D. K., *So. l* or *s* 18 S E
Miller, H. K., Jr., *So. l* or *s* 8 B H
Miller, J. B., *So. l* or *s* 52 '79 H
Miller, K. B., *Fr. a* 11 S E
Miller, L. S., *Fr. l* or *s* 143 L
Miller, R. M., *Fr. a* 4 A H
Miller, T. A., *Instructor* (35) 52 B
Millinger, W. H., *Sr. l* Murray-Dodge Hall
Mills, W. B., *Fr. l* or *s* 3 S R
Milne, J. C., II., *Jr. a* 4 W W
Milne, W. K., *Fr. l* or *s* 13 B S
Minott, J. A., *So. l* or *s* 62 '79 H

Mish, J. D., *Fr. a* 141 H
Molloy, C. J., *Fr. a* 27 N E
Montgomery, J. S., *So. l* or *s* 52 C
Moore, D. D., *Fr. a* 35 N E
Moore, H. G., *So. l* or *s* 111 H
Moore, M. D., *So. ce* 9 N D
Moore, R. G., *Jr. l* 9 Park Pl.
MOREY, C. R., *Ass't Professor* (29) 342 Nassau St.
Morgan, G. F., Jr., *Sr. a* 43 L
Morgan, J. A., *Fr. l* or *s* 90 Nassau St.
MORGAN, S. W., *Instructor* (36) Absent
Morgan, T. V., *So. a* 94 H
Morgan, W. L., *So. l* or *s* 3 A H'm
Morris, H. A., *Fr. ce* 4 U P
Morrow, G. R., *Par.* 208 H S
MORSE, A. E., *Ass't Professor* (34) 269 Nassau St.
Mossman, W. S., *So. l* or *s* 72 H
Mount, E. C., *Fr l* or *s* 23 Bank St.
Mulford, A. H., *Fr. l* or *s* 72 L
Munford, B. B., *Fr. l* or *s* 5 A C
MUNRO, D. C., *Professor* (27) 119 Fitz Randolph Rd.
Munsell, E. W., *Jr. l* 5 W M W
MURCH, H. S., *Ass't Professor* (32) 1 A, C
Murray, A. B., *Sr. l* 113 B
Murray, G. D., Jr., *Fr. l* or *s* 61 H
Murray, J. W., *Fr. ce* 107 Mercer St.
Myers, D. G., *Fr. a* 1 C H'm
MYERS, W. S., *Ass't Professor* (30) 104 Bayard Lane

NEHER, F., *Professor* (23) 148 Library Pl.
Neher, J. H., *Fr. l* or *s* 14 S D
Newton, O., Jr., *q* 15 Univ. Pl.
Nimick, W. K., *Jr. l* 26 C
Norris, H. M., *Jr. s* 69 Alexander St.
Norris, H. S., *Fr. l* or *s* 15 S W
NORTHRUP, E. F., *Ass't Professor* (31) 30 Wiggins St.
Norton, A. L., *Jr. l* 9 M D
Norton, P. R., *Jr. a* 47 No. Tulane St.
Nourse, L. G., *f* 102 G C
NOYES, A., *Professor* (27) Princeton, N. J.

O'Brien-Moore, A., *g* 104 G C
O'Dea, J. B., *So. l* or *s* 112 L
O'Gorman, J. A., Jr., *So. a* 82 H
Olmstead, P. S., *Jr. s* 11 B
O'Neill, J. R., *So. l* or *s* 42 B
Opie, H. R., *Fr. l* or *s* 15 S E
Orth, P. W., *Jr. l* 15 C
Orwig, S. E., *g* 29 B S
OSBORN, W. C., *Trustee* (17) New York, N. Y.
Osborne, R. R., *Fr. l* or *s* 23 L
Osborne, W. H., Jr., *So. l* or *s* 52 B
OSGOOD, C. G., *Professor* (27) 92 Stockton St.
Osmer, G. G., *So. l* or *s* 3 M D
Otis, C., *So. l* or *s* 94 H
Paddock, B. H., *Fr. a* 11 A H
Paddock, T. F., *Fr. a* 11 A H
Page, E. S., Jr., *Fr. a* 112 H
Page, L. R., *Jr. l* 51 C
Page, R. L., *So. l* or *s* 92 H
Palmer, R. S., *Fr. l* or *s* 24 M D

PARK, E. A., *Instructor* (37) 36 Univ. Pl.
Parker, C., III, *So. a* 161 L
Parker, J. F., *Jr. l* 102 B
Parker, P., Jr., *Sr. a* 25 S E
Parrott, D., *So. a* 104 Mercer St.
Parrott, L. M., *Fr. l* or *s* 70 S W
PARROTT, T. M., *Professor* (22) 104 Mercer St.
Parry, J. S., Jr., *So. l* or *s* 92 H
PATON, S., *Lecturer* (34) Greenlands
PATTON, F. L., *Ex-President* (20) Hamilton, Bermuda
Paxton, W. M., III, *Jr. a* 33 '79 H
Peck, F. C., *So. l* or *s* 153 L
PECK, G. M., *Library Assistant* (316) University Library
Peden, A. V., *So. l* or *s* 8 N R
Penfield, T. B., Jr., *Fr. a* 38 L
Penney, T. C., *Fr. l* or *s* 310 H'm
Perry, B. E., *f* 126 G C
Perry, E. R., *Fr. l* or *s* 142 H
Pershing, J., *Fr. a* 4 A H

Peters, T. D., *So. l* or *s* 9 M D
Petterson, S. H., *So. l* or *s* 96 B
PFEIFFER, G. A., *Instructor* (36) 23 Madison St.
PHILLIPS, A. H., *Professor* (23) 54 Hodge Rd.
Phillips, G. W., *Sr. l* Helmetta, N. J.
PHILLIPS, H. C., *Trustee* (18) Philadelphia, Pa.
Piaget, E. A. M., *So. l* or *s* 71 H
Pike, C. L., *Fr. l* or *s* 21 M D
Piper, G. S., *Fr. l* or *s* 16 M D
PITNEY, J. O. H., *Trustee* (17) Morristown, N. J.
Pitney, M., Jr., *So. a* 53 C
Planas, H. M., *Sr. l* 46 Wiggins St.
Plough, D. H., Jr., *So. ce* 101 L
Polhemus, F. S., *So. l* or *s* 44 C
POMEROY, R. B., *Church Secretary, Philadelphian Society* (354) N. Y. City
Pope, J. N., *Fr. l* or *s* 84 B
Porteous, R. E., *So. l* or *s* 13 W W
Powers, W. L., *So. l* or *s* 63 '79 H
PRENTICE, W. K., *Professor* (23) Princeton Bank Bldg.
Prentiss, T. L., *Jr. a* 91 H
PRIEST, G. M., *Professor* (26) 10 Nassau St.
PROCTER, W. C., *Trustee* (17) Cincinnati, O.
Proctor, L. M., *Jr. ce* 90 Nassau St.
Pulling, T. J. E., *So. l* or *s* 6 A H
Purdy, R. F., *So. l* or *s* 10 E M W
PYNE, M. T., *Trustee* (17) Drumthwacket

Rabinowitz, S. M., *Fr. l* or *s* Trenton, N. J.
Rafalsky, R. L., *So. l* or *s* 123 H
Rahn, E. F., *Fr. a* 36 N E
Raleigh, T. L., *So. ce* 5 N W
Ralston, J. V., *Jr. l* 11 B
Ramee, A. R., *Fr. a* 4 M D
Ramsay, J. G., *Jr. a* 1 B
Rankin, J. M., *Sr. l* 8 S W
RANKIN, W. M., *Professor* (22) 5 Evelyn Pl.
Ransom, J. C., *So. l* or *s* 64 L
Rawlings, J. M., *Fr. l* or *s* 15 N D
RAYCROFT, J. E., *Professor* (26) 120 Broadmead
Raymond, R. V., *Fr. l* or *S* 28 N E
Raymond, V. K., *Jr. l* 28 N E
Red, W. S., Jr., *Fr. a* 19 N W
Reed, H. B., II, *So. l* or *s* 8 U P
Reed, L. C., *So. a* 8 L P
Reichner, A., *Fr. a* 112 H
Reidinger, A. D., *Sr. s* 9 S W
Reimer, O. B., *Fr. l* or *s* 114 H
Rentschler, P. E., *q* 124 H
Requa, I., Jr., *q* 2 L P
Reynolds, L. C., *So. l* or *s* 3 A H'm
Reynolds, P. D., *So. a* 31 L
Rhodes, C. E., Jr., *Fr. a* 11 N E
Rhodes, J. B., *Fr. l* or *s* 41 L
Rhodes, R. P., *Fr. a* 9 U P
Rich, J. B., *Jr. l* 24 '79 H
RICHARDSON, A. S., *Instructor* (36) Absent
RICHARDSON, E. C., *Librarian* (21) 220 Mercer St.
Richardson, F. S., *So. l* or *s* 12 S W
Richardson, H. M., *Fr. l* or *s* 44 L
Richardson, H. T., *Fr. l* or *s* 34 N E
Rickert, T. H., *So. a* 1 E W
RICKETTS, L. D., *Trustee* (17) Warren, Ariz.
Ritchie, J. R., *So. a* 181 L
ROBBINS, E. Y., *Professor* (22) 144 Library Pl.
Robbins, G. A., *So. a* 1 B, H'm
Robbins, M. H., *Jr. s* 6 N W
Roberts, T. C., *Fr. l* or *s* 65 B
ROBERTS, T. W., *Trustee* (18) Philadelphia, Pa.
ROBINSON, C., *Ass't Professor* (32) 55 Battle Rd.
ROBINSON, P. E., *Ass't Professor* (30) 128 Broadmead
Robinson, S. M., *g* 31 Edwards Pl.
Robinson, W. B., *Fr. l* or *s* 35 L
Roche, H. S., *Sr. a* 21 B
Roeandt, A., *g* 204 H S
Rogers, L. E., *So. l* or *s* 124 L
Rogers, M., *So. l* or *s* 17 N W
Rogers, W., Jr., *Fr. l* or *s* 17 N W

ROOT, R. K., *Professor* (28)
31 Chambers St.
Rosenbaum, F. F., *So. l* or *s* 123 H
Rothchild, L. H., *So. l* or *s* 101 B
Rothermel, J. G., *Jr. a* 10 N W
Rothschild, H. F., *Fr. l* or *s* 101 H
Rouse, R. G., *Jr. l* 6 N M R
Rowland, R., *g* 31 A S
Rubel, A. A., *Fr. l* or *s* 8 E W
RUSSELL, A., *Director of Music* (34) G C
RUSSELL, A. D., *Trustee* (17)
Edgerstoune
RUSSELL, H. N., *Professor* (26)
79 Alexander St.
Russell, J., Jr., *Fr. l* or *s* 16 C
Russell, J. E., *Fr. l* or *s* 5 U P
Russell, R. P., *Fr. a* 68 L
Ruth, R. B., *Fr. l* or *s* 2 D H
Rutledge, W. U., *q* 3 C H
Ryan, J. R. T., II, *Fr. a* 7 N D

Sailer, R. C., *Jr. l* 2 B H
St. John, C. E., *Fr. l* or *s* 19 N W
Samson, H. G., *Jr. l* 42 '79 H
Samstag, H. R., *Jr. l* 21 H
Samuels-Lall, P., *g* 16 B S
Sandell, C. V., *So. l* or *s* 10 S W
Sanders, K. D., *So. l* or *s* 18 S W
Sanger, R., *So. a* 43 Park Pl.
SARGENT, H. H., *Professor* (28) G C
Savage, W. L., *So. a* 20 E M W
Savidge, J. F., *Jr. a* 13 M D
Scarborough, H. M., *Fr. l* or *s*
Trenton, N. J.
Schabacker, R. W., *Fr. l* or *s*
12 N E
Schaefer, B. K., *So. l* or *s* 41 H
Schaefer, J. L., Jr., *Jr. l* 41 H
Schafer, M. F., *Fr. ce* 7 B
Schanck, L. M., *So. l* or *s* 10 S E
Scheerer, J. D., *Fr. l* or *s* 73 H
Schenck, J. H., III, *So l* or *s*
4 W W
Schickhaus, E., Jr., *So. l* or *s* 43 H
Schirmer, R., *Fr. l* or *s* 3 B
Schmidt, S. S., *Jr. a* 22 H
Schoedinger, P. S., *So. a* 20 E W
Schroeder, A. H., Jr., *So. l* or *s*
13 C
Schroeder, J. N., Jr., *So. l* or *s*
31 L
Schroeder, L. S., *q* 7 L P
Schumann, E. W. A., *So. l* or *s*
2 M D
Schuster, C. E., *So. l* or *s* 181 L
Schwabacher, W. S., *Sr. a* 103 B
Schweitzer, F., *g* 206 H S
Scobie, J. R., *Sr. l* 20 N W
SCOON, R. M., *Ass't Professor* (32) 19 Cleveland Lane
SCOTT, W. B., *Professor* (20)
30 Bank St.
SCRIBNER, C., *Trustee* (17)
Morristown, N. J.
Scribner, C. H., Jr., *Fr. l* or *s*
13 M D
Scureman, M. S., *Fr. l* or *s*
19 W W
Sears, L. M., *Sr. a* 15 S M R
Seiberling, J. P., *Fr. l* or *s* 2 S D
Selby, R., *g* 404 H S
Self, S. B., *Jr. l* 305 H'm
Senseman, J. S., *Jr. s* 14 M D
Shafer, B. S., *g* 15 C G C
Sharp, E. W., *Fr. l* or *s* 8 E M W
Sharpe, J. M., III, *So. a* 2 N D
Shaw, A., Jr., *Jr. a* 12 '79 H
Shaw, L. E., *Fr. l* or *s* 30 S E
SHEA, J. B., *Trustee* (17)
Pittsburgh, Pa.
Shea, S. M., *Fr. l* or *s* 22 H'm
SHELDON, E. W., *Trustee* (17)
New York, N. Y.
Shelton, E. M., *q* 44 B
Sherman, R. T., *So. l* or *s* A B
Sheward, C. M., Jr., *Fr. l* or *s*
122 L
SHIPMAN, H. R., *Ass't Professor* (28) 27 Mercer St.
Shipway, W. B., *Fr. ce* 123 L
SHULL, G. H., *Professor* (27)
60 Jefferson Rd.
Sibley, G. H., *So. l* or *s* 71 B
Sichelstiel, L. H., *So. a* 152 L
Siedler, H. D., *Jr. a* 9 M D
SILVESTER, C. F., *Assistant* (35)
Absent
Silzer, P. W., *Fr. l* or *s*
24 Dickinson St

SINCLAIR, W. J., *Ass't Professor* (34) 51 Patton Ave.
Sinclaire, D. C., *Sr. l* 13 S D
Sipe, H. A., *Sr. ce* 9 S R
Sitterly, B. W., *f* 15 D G C
Skidmore, J. B., *Fr. l or s* 1 N E
Skinner, C. E., Jr., *Fr. l or s* 12 N D
Skinner, G. D., *Jr. l* 6 A C
Sloan, A. N., Jr., *Fr. a* 19 N E
Sloan, J. S., *q* 54 '79 H
Sloane, C., *Jr. a* 24 B
Smalley, C. S., *Fr. l or s* Rocky Hill, N. J.
Slocum, L. B., *Fr. l or s* 10 N E
Smith, E. F., *Fr. l or s* 38 N E
Smith, H. B., Jr., *Fr. l or s* 10 U P
SMITH, D. P., *Ass't Professor* (31) 173 Nassau St.
SMITH, E. B., *Instructor* (36) Absent
Smith, G. L., Jr., *Jr. a* 81 B
Smith, H. B., *So. a* 14 B
SMITH, H. L., *Instructor* (37) 68 Wiggins St.
Smith, H. M., *Jr. ce* 32 '79 H
SMITH, H. S. S., *Professor* (22) 94 Bayard Lane
Smith, M. D., *So. l or s* 16 Dickinson St.
SMITH, N. KEMP, *Professor* (23) Absent
Smith, P., Jr., *So. a* 63 '79 H
SMYTH, C. H., JR., *Professor* (23) 22 Morven St.
Smyth, H. DeW., *Sr. a* 66 C
Snyder, F. F., *Jr. s* 56 C
SPAETH, J. D., *Professor* (26) 32 Edgehill St.
Sparhawk, R. D., *So. a* 71 B
SPAULDING, E. G., *Professor* (27) 8 Edgehill St.
Speers, T. C., *Fr. a* 113 H
Speers, W. E., *Par.* Montclair, N. J.
SPEIR, F., *Counsel to the Board* (18) New York, N. Y.
Speir, R. W., Jr., *So. l or s* 308 H'm
Sprague, I. A., Jr., *Jr. s* 41 '79 H
Squier, F. C., Jr., *So. l or s* 90 Nassau St.
Stachelberg, C. G., *So. l or s* 54 B
Starr, L. E., *Jr. ce* 56 Bayard Lane
Stein, E. T., *Fr. a* 10 W M W
STEVENS, H. H., *Instructor* (37) Absent
Stevens, L. M., *q* 1 M D
Stevenson, S. R., *Sr. l* 83 Mercer St.
Stewart, C. I., *Sr. l* 14 C G C
STEWART, G. B., *Trustee* (17) Auburn, N. Y.
STEWART, J. A., *Trustee* (17) New York, N. Y.
Stewart J. H., *Sr. s* 16 N E
Stewart, P. W., *Fr. l or s* 42 H
Stewart, S. A., *So. l or s* 94 B
Stewart, W. B., *So. l or s* 3 W M W
Stillwell, R., *Fr. a* 62 C
Stocker, M. M., *g* 315 H S
Stoetzer, J. J. B., *Jr. l* 5 E W
Stohlman, W. F., *g* 122 G C
STONE, D. L., *Instructor* (35) Absent
Street, D. MacQ., *Jr. l* 95 B
Streetman, W. McI., *Fr. l or s* 116 B
Streichenberg, C. F. A., *Jr. l* 6 N W
Stricker, J. B., *So. l or s* 51 H
Strong, W. McC., *Fr. a* 7 W M W
Strubing, J. K., Jr., *Sp* 163 L
STUART, D. C., *Ass't Professor* (31) The Western Way
STUART, D. R., *Professor* (23) 101 Broadmead
Stuart, L. B., *q* 185 L
Studdiford, W. E., Jr., *Sp* 53 '79 H
Stull, A., *Fr. l or s* 15 E W
Sullivan, J. F., *Par.* 48 Charlton St.
Sutphen, P. L., *Fr. l or s* 142 H
Swaney, D. P., *So. l or s* 14 '79 H
Sweet, C. F., *Fr. l or s* 32 B
Symons, N. S., *Jr. a* 31 H

Tappen, I. L., *Fr. a* 18 M D
Tarbox, H. B., *Fr. l or s* 90 Nassau St.

Taylor, A. W. H., *Jr. a* 2 U P
Taylor, H. C., *So. l* or *s* 11 '79 H
TAYLOR, H. S., *Ass't Professor* (33) Absent
Taylor, J. C., Jr., *Sr. l* 44 '79 H
Taylor, L. L., *So. l* or *s* 21 S E
Taylor, O. F., *Fr. l* or *s* 53 H
Taylor, W. R. K., Jr., *So. a* 12 B
Teich, J., *Jr. s* Trenton, N. J.
Teng, S. P., *Sr. l* 26 N E
Thach, W. T., *Fr. l* or *s* 143 H
THAYER, H. W., *Ass't Professor* (29) Absent
Thomas, N. E., *Fr. l* or *s* 5 S M R
THOMPSON, H. B., *Trustee* (17) Greenville, Del.
THOMPSON, H. D., *Professor* (21) 11 Morven St.
Thompson, K. I., *Sr. l* 22 '79 H
Thompson, W. M., *So. l* or *s* 2 B
Thurman, L. R., *So. l* or *s* 92 B
Todd, R., *Fr. a* 24 Dickinson St.
Todd, W., *Fr. l* or *s* 24 Dickinson St.
Tompkins, R. L., *Fr. l* or *s* 10 Madison St.
TOOKER, N. B., *Ass't Professor* (34) 30 Battle Rd.
Townley, J., *g* 7 B S
Townley, P. B., *So. l* or *s* 43 H
Townsend, R. C., *So. l* or *s* 2 M D
Townsend, W. S., *Fr. l* or *s* 121 L
Tracy, F. L., *Jr. l* 11 S W
Tramel, J. H. F., *Fr. ce* 132 L
Trimble, R. M., Jr., *So. l* or *s* 12 A H
TROWBRIDGE, A., *Professor* (23) Absent
Trowbridge, C. P., *Fr. a* 28 C
Turnbull, P. R., *Fr. l* or *s* 73 H
Turner, H. B., *So. a* 12 H'm
Turner, D. A., *Fr. l* or *s* 172 L
Twining, S. E., *f* 14 B G C
Twitchell, H. M., *So. l* or *s* 41 B

Uebelacker, D. A., *Fr. l* or *s* 123 L
Upson, R. J., *Fr. l* or *s* 23 N E
Urmy, T. VanO., *Fr. l* or *s* 7 S W

Van Alen, A. H., *So. l* or *s* 1 W W
VAN DEN VEN, P. J. J., *Lecturer* (28) 76 Murray Pl.
Van Dusen, H. P., *Jr. a* 22 C
VAN DYKE, H., *Professor* (22) Absent
Van Dyke, M., *g* 407 H S
VAN DYKE, P., *Professor* (22) Absent
VAN HOESEN, H. B., *Assistant Librarian* (33) 30 Linden Lane
VAN INGEN, G., *Ass't Professor* (30) Absent
Van Meter, L. W., *Jr. a* 18 N E
VANNEMAN, J. S., *Ass't University Physician* (365) The Infirmary
VAN NEST, J. S., *Ass't Professor* (31) 37 Cleveland Lane
VAN RENSSELAER, A., *Trustee* (17) Philadelphia, Pa.
Van Tuyl, R. W., *Sr. a* 93 H
VEBLEN, O., *Professor* (25) Absent
Vehslage, F. C., *So. ce* 3 B H
Vermeule, W. C., *So. ce* 71 H
Vermillion, J. G., *Fr. l* or *s* 14 U P
Verner, E. M., *Jr. l* 102 B
Vernon, M. H., *Fr. l* or *s* 4 E W
Vinache, H. M., *g* 16 Park Pl.
Vogt, A. R., *So. l* or *s* 52 '79 H
Vogt, E. L., *Sr. a* 43 '79 H
von Hasslacher, H., *Sr. l* 3 A, H
Voorhis, J. W., *g* 401 H S
VREELAND, W. U., *Professor* (23) 180 Mercer St.

Walker, H. McC., *So. a* 101 L
WALLACE, H. B., *Instructor* (36) Absent
Wallace, J. M., *Fr. l* or *s* 171 L
Waller, E. J., *Jr. s* 13 L
Walley, H. R., *Fr. a* 10 W M W
Wallis, P., *Fr. l* or *s* 54 H
Walsh, W. J., *Fr. a* 19 N D
Walter, P. C., *Jr. s* 61 L
Walters, S. F. D., *Jr. a* 46 Wiggins St.
Wang, K. P., *Sr. l* 3 Madison St.
Wanless, H. R., *So. l* or *s* 1 D H'm
Ward, C. A., *Jr. l* 51 B
Ward, L. R., Jr., *So. l* or *s* 111 H

Ward, M., *Sr. a* Guernsey Hall
Warren, F. D., Jr., *Jr. a* 31 H
WARREN, H. C., *Professor* (22) Absent
Washburn, R. H., *Jr., l* 14 E W
Watts, B. F., Jr., *So. l* or *s* 2 B
Watts, E. E., *Fr. l* or *s* 24 Dickinson St.
Webb, B. M., *Fr. l* or *s* 42 H
Webster, A. W., *Fr. a* 6 S W
Webster, E. H., *Fr. a* 132 L
WEDDERBURN, J. H. M., *Ass't Professor* (30) Absent
Weishaar, E. A., *Fr. l* or *s* 32 N E
Weiskotten, H. T., *f* 112 G C
Welch, J. W., *q* 16 W W
Welles, H. H., III, *Fr. l* or *s* 98 B
Wells, W. G., *So. l* or *s* 46 Wiggins St.
Welsh, S., *Fr. l* or *s* 103 H
Wenslick, R. W., *g* 400 H S
Werner, J. L., *Fr. l* or *s* 143 H
WERTENBAKER, T. J., *Ass't Professor* (32) 111 Fitz Randolph Rd.
WEST, A. F., *Dean of the Graduate School* (21) Wyman House, G C
West, J. C., *Jr. a* 11 N W
WESTCOTT, J. H., *Professor* (21) 200 Mercer St.
Westgate, T. H., *Fr. l* or *s* 10 N D
Wheeler, H. L., Jr., *Jr. l* 6 A C
Wheelwright, P. E., *Fr. l* or *s* 37 S E
Whelen, J. H., Jr., *Fr. l* or *s* 52 H
White, E. N., *Fr. a* 306 H'm
White, F. P., *Fr. l* or *s* 18 N W
White, S. A., Jr., *Fr. l* or *s* 41 L
White, T. G., *So. l* or *s* 4 S E
Whitman, R. C., *Jr. s* 8 N W
WHITNEY, G. T., *Ass't Professor* (30) 33 Jefferson Rd.
Whitney, W. B., Jr., *Jr. ce* 53 '79 H
Widenmann, H. A. K., *Sr. l* 3 E M W
Wilbur, F. L., *Jr. s* 5 S R
Wilcox, A. D., *Fr. l* or *s* 22 S E
Williams, B. W., *Fr. l* or *s* 115 B
Williams, C. H., *Fr. l* or *s* 53 H
Williamson, G. F., *So. l* or *s* 4 A C
Williamson, W. M., *So. l* or *s* 66 Nassau St.
WILLSON, F. N., *Professor* (20) Princeton, N. J.
Wilmot, W. G., *So. l* or *s* 27 C
Wilson, H. S., *Fr. l* or *s* 307 H'm
Wilson, J. A., *So. a* 1 E M W
Wilson, J. C., *g* 95 Mercer St.
Wilson, J. L., *Sr. s* 1 E M W
Wilson, K. O., *So. l* or *s* 11 S D
Windels, A. E., *Jr. l* 12 M D
Winn, J. J., *Jr. l* 3 A, C
Wintersteen, J., *Jr. a* 2 U P
WINTRINGER, G. C., *Secretary of Business Administration* (38) Stanhope Hall
Wisner, H. L., *Fr. a* 111 L
Witherill, L. L., *Fr. l* or *s* 36 L
Witherspoon, J. B., *So. l* or *s* 64 L
Wolf, E., *So. l* or *s* 3 S E
Woltz, R. H., *Par.* 103 H S
Wood, A., Jr., *Fr. l* or *s* 6 B
Wood, C. T., Jr., *Fr. a* 3 S R
Wood, H. N. E., *Fr. a* 46 L
Wood, T. J., II, *q* 3 C H'm
Woods, D. W., *So. a* 2 C H'm
Woods, J. M., Jr., *Sr. a* 9 S R
Woodworth, B. S., *Fr. l* or *s* 300 H'm
Woodworth, R. C., *So. l* or *s* 96 B
Woolworth, R. W., *Fr. l* or *s* 21 H
Worden, J. S., *So. l* or *s* 55 C
Worley, J. G., *q* 30 N E
Wren, W. W., *Jr. ce* 12 N W
WRIGHT, J., *Art Reference Librarian* (316) Art Museum
Wright, W. A. S., *Fr. l* or *s* 309 H'm
Wu, A. V., *g* 34 A S
Wu, T. Y., *Sr. l* 60 B S
Wylie, L. L., *So. a* 8 E W

Yeiser, F. T., *So. a* 122 H
YOUNG, A. N., *Instructor* (36) Absent
Young, R. B., Jr., *q* 19 Bank St.

INDEX

	PAGE
Admission, Terms of, Summary	79–82
Fee	62
for Asiatic Students	108
from other colleges	110
New Plan	65, 73
Old Plan	61, 72
to Graduate School	227
to Partial Courses	109
to School of Electrical Engineering	222
Values in Units	83
Aeronautics, U. S. School of	329
Alden, Memorial Prizes	425
Alexander Hall	364
Alternative Method of Admission, see Admission, New Plan	
Alumni Associations	470
Representation	465
Trustees	18
American Whig Society	391
Archaeological Ethnological Collection	372
Art and Archaeology, Department of	151
Final Special Honors	157
Art Museum	389
Asiatic Students, Admission	108
Astronomy, Department of	206
Final Special Honors	207
Library	318
Athletic Grounds and Buildings	392
Attendance, Regulations	337
Atwater Prize	418
Baird Prizes	417
Barnum Prize	428
Bassett Scholarship	441
Bennett Prize	421
Bergen Collection	321
Biddle Essay Prize	427
Bills, University	415
Biology, Department of	202
Final Special Honors	204
Laboratories	386
Library	324, 386
Blind, Books for the,	321
Boat House, Class of 1887,	394
Boudinot Fellowships	242
Bower Collection	317
Brackett Physics Library	324
Brokaw Memorial Building	392
Bureau of Student Self-Help	446
Butler Scholarship	436
Butler Tract	360
Calendar	10
Campus	359
Chancellor Green Library	316
Chapel, Marquand	363
Charitable Funds	445
Chemical Club Fund, Plaut	356
Chemical Laboratories	379
Chemistry, Department of	190
Final Special Honors	195
Seminary	300
Chicago Scholarship	441
Christianity, University Lectures on	356
Christie Scholarship	441
Civil Engineering, Department of	130, 213
Course of Study	130
Final Special Honors	136
Intensive Course	135
Laboratory	387
Class of 1859 Prize	418
Class of 1860 Fellowship	243
Class of 1861 Prize	427
Class of 1869 Prize	419
Class of 1870 Prizes	424, 427
Class of 1873 Fellowship	244
Class of 1875 Library	319
Class of 1876 Memorial Prize	420
Class of 1877 Fellowship	240
Class of 1877 Laboratory	380
Class of 1878 Library	317
Class of 1878 Scholarships	439
Class of 1879 Hall	370
Class of 1883 Fellowships	243
Class of 1883 Library	317
Class of 1883 Prizes	425
Class of 1886 Memorial Building	394
Class of 1887 Boat House	394
Class of 1889 Library	317
Classics, Department of	158
Final Special Honors	166
Seminary	323
Latin Pro-Seminary	323
Cleveland Tower	373
Clio Hall Collection	321
Cliosophic Society	391
College Entrance Board Examinations	61
Colonial Wars, Society, Prize	421
Commencement Speakers	348
Committees, Departmental Conference	41
Faculty	40
Graduate Council	467
Trustees	19
Comprehensive Examination	69
Conditions	339, 344, 345
Council, Graduate	467
Converse Scholarships	438

	PAGE
Courses:	
Academic	139
Civil Engineering	213
Electrical Engineering	223
Graduate	247
Music	314
Princeton Theol. Seminary	306
Scientific	182
Cruikshankiana, Meirs Collection	322
Cuneiform Documents, Collection of	320
Cuyler, Theodore, Scholarship	246
Dean's House	361
Degrees:	
Bachelor of Arts	115
Bachelor of Letters	115
Bachelor of Science	115
Civil Engineer	130
Doctor of Philosophy	230
Electrical Engineer	226
Master of Arts	229
Degrees conferred 1916-1917	449
Department Libraries	324
Dickinson Hall	362
Dickinson Prize	424
Dining Halls	371, 414
Directors of Seminaries	313
Dormitories	367
Dropping, Rules of	342
E. M. Fellowship	245
E. M. Museum	382
Economic Seminary	323
Economics and Social Institutions, Department of	148
Seminary	261, 323
Final Special Honors	150
Electives, Choice of	335
Electrical Engineering, School of	222
Buildings and Apparatus	378
Engineering Library	318
English, Department of	168
Final Special Honors	172
Seminary	323
Entrance, see Admission	
European War collections	319
Examination Centers, June 1918	67
Examinations for Admission	
June 1918	63
September 1918	68
Conduct of	338
Expenses	401
Faculty and Instructors	20
Faculty Meetings	13
Fellows	477
Fellowships:	
Advanced	238
College	243
Ordinary	240
Regulations	236
University	237
Final Special Honors	127
Financial Aid, see Remission of Tuition.	

	PAGE
Fisk, Pliny, Statistical Library	320
Fitz Randolph Gateway	366
Freshman Tests	346
Freshman Year, Course of Study	116
Gansevoort Scholarship	438
Garrett Collection of Coins	321
Garrett Collection of MSS	319
Garrett European War Collection	319
Garrett Prize	422
Gelston Scholarship	441
Geological Laboratories	385
Library	324
Geology, Department of	197
Final Special Honors	200
Summer course	201
Geology Club	201
Germanic Seminary	317
Golf Club	394
Goldie Field	394
Government Service, Preparation for	258
Grades, see Standing.	
Graduate College	232, 373
Graduate Council	467
Graduate School, Admission	227
Courses of Instruction	247, 307
Degrees	229
Fees	228
Fellowships	236
Scholarships	246
Graduation	347
Fee	401
Green Scholarship	438
Green, Chancellor, Fellowship	244
Green, John C., School of Science, See School of Science.	
Guyot Hall	380
Gymnasium	393
Halls, see Literary Societies.	
Hall Libraries	325
Halsted Observatory	375
Harvard Fellowship in Chemistry	242
Historical Seminary	323
History and Politics, Department of	143
Fellowship	244
Final Special Honors	147
Seminary	253, 323
Holidays, See Calendar.	
Honorary Degrees, 1916-1917	450
Honors Conferred, 1916-1917.	457
General and Special	126, 136
Honor System in Examinations	338
Hospital, see Infirmary.	
Humphreys Prizes	425
Hutton Collection of Death Masks	322
Memorial Collection	322
Prize	423
Hygiene and Physical Education, Department of	208

	PAGE
Infirmary, McCosh	365
Infirmary, Regulations	348
Instruction, Method of	124
J. S. K. Mathematical Fellowships	240
Jackson Scholarship	438
Jacobus Fellowship	238
Joline Prize	419
Junior Orator Medals	424
Junior Year, Course of Study	118
Kaye Scholarships	440
Kennedy Scholarships	436
Laboratories and Museums	375
Latin Proseminary	323
Lectures, Public	355
Lee Collection	321
Library, University	316
Literary Societies	391
Long Scholarship	437
Lynde Debate Prize	417
Lytle European War Relics	319
McCormick Field House	396
McCormick Scholarship	436
McCosh Prize	417
McCosh Scholarships	439
McCosh Hall	367
McCosh, Isabella, Infirmary	365
MacDonald Fellowship	242
Maclean Prize	424
Madison Hall	371
Maine Scholarship	442
Manners Prizes	422
Manuscript Collection	318
Marquand Art Library	324
Marquand Chapel	363
Mathematical Seminary	323
Mathematics, Department of	182
Final Special Honors	184
Mathematics and Physics, Honors course	188
Maule Fellowship	243
Meirs Collection of Cruikshankiana	322
Military Instruction	210
Miller, Samuel, Collection	320
Mineralogical Collections	371
Ministry, Candidates, Fund for	445
Modern Languages, Dept. of	175
Fellowship	244
Final Special Honors	179
Germanic Seminary	323
Romance Seminary	323
Morgan Collection of Virgils	318
Munn Fellowship	242
Museums and Laboratories	375
Music, Department of	314
Library	319
Nassau Hall	360
Natural Science Museum	380
Navigation and Seamanship	207
Nelson Collection	321
New England Scholarship	442
New Jersey Imprints, Collection	321
New Jerseyana, Nelson Collection	321
New York Herald Prize	420
Observatory, Halsted	375
of Instruction	375
Office Hours	8
Officers of the University	41
Orange Scholarship	427
Oriental MSS., Garrett Collection	319
Orris Fund	440
Osborn Field House	392
Packard Scholarships	440
Page, John Harding, Classical Fellowship	242
Palaeontological Library	324
Palmer Memorial Stadium	395
Palmer Physical Laboratory	376
Partial Courses, Admission to	109
Paton Collection of Oriental Philology	324
Paton Spanish War Collection	319
Patterson Collection	320
Patton, J. L. Scholarship	437
Peking, Princeton Center in	353
Philadelphian Society	350
Collection	321
Philosophy and Psychology, Department of	139
Final Special Honors	141
Seminary	322
Physical Education, see Hygiene	211
Physics, Department of	185
Honors Course in	186, 188
Pierson Civil War Collection	319
Pitney Collection	319
Plainfield Entrance Prize	428
Plan of Undergraduate Study	115
Plaut, Albert, Chemical Fund	356
Poe Field	394
Politics, see History and Politics.	
Porter Law Library	320
Potts, George, Bible Prizes	418
Preceptorial Method	124
Preliminary Examinations	73
Princeton Peking Center	353
Princeton Summer Camp	353
Princeton Theological Seminary, Courses	306
Library	325
Princeton University Collection	319
Princeton University Press	397
Princeton University Store	397
Prizes	417
Prizemen, 1916-1917	458
Procter Fellowships	238
Procter Hall	374
Prospect	362
Psychological Laboratory	376
Seminary	250, 322
Public Lectures	355
Pyne Scholarship	438
Pyne Tower	374
Queen Scholarship	246
Rank, Final	347
Rea Scholarship	439
Readmission rules	342, 344